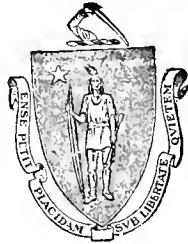


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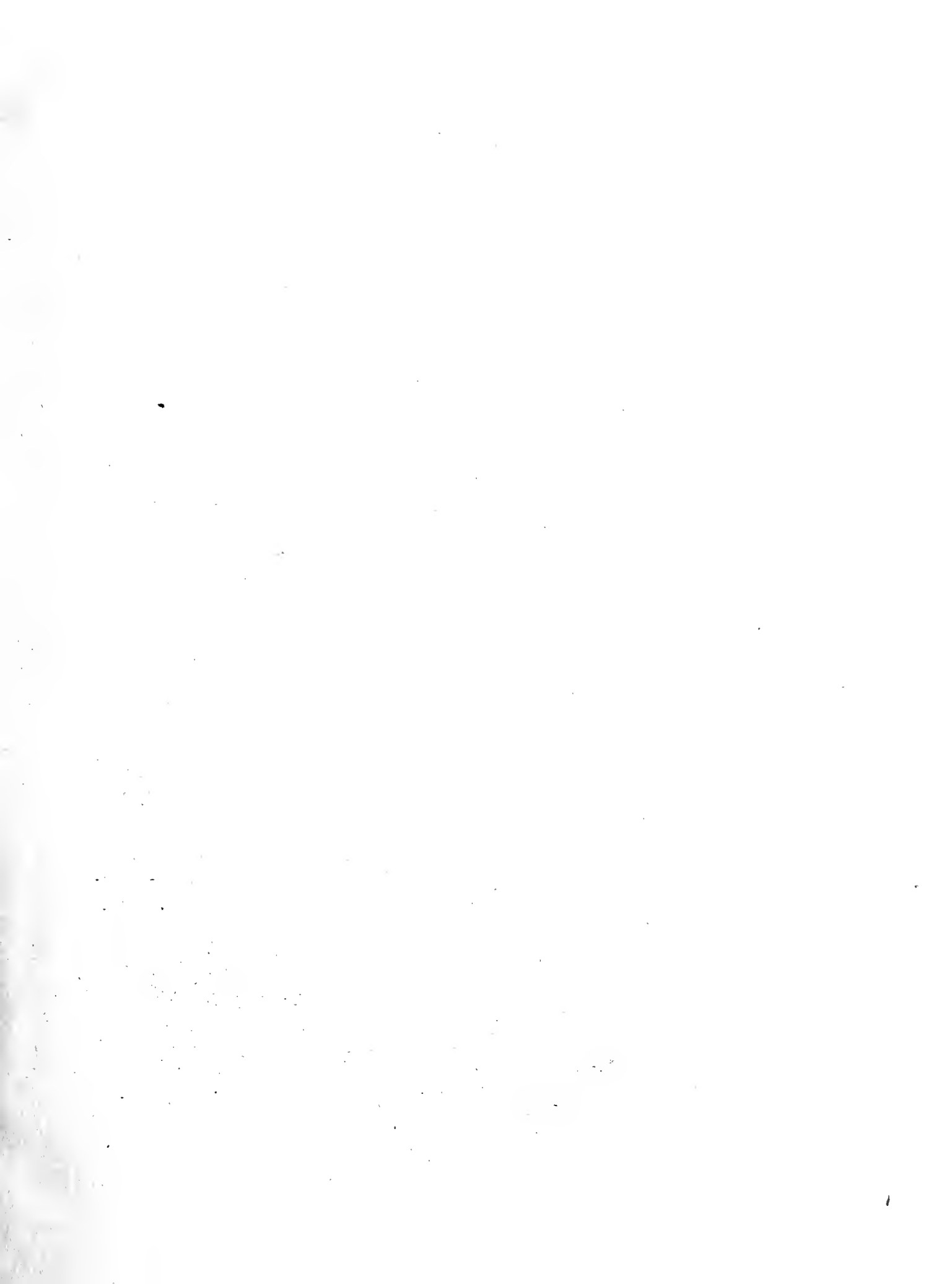
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NATHANIEL NEWMAN SHERWOOD, V.M.H.



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— TO —

NATHANIEL NEUMAN SHERWOOD, V.M.H.,

THE SEVENTY-SIXTH VOLUME OF "THE GARDEN"

Is dedicated.

IT is with the greatest pleasure that we dedicate a volume of THE GARDEN to one who has devoted a long and strenuous life to the advancement of horticulture. Head of the large wholesale seed firm of Messrs. Hurst and Sons of Houndsditch, Mr. Sherwood is one of the best known and popular men in the horticultural world. Born in France in April, 1846, he was brought to England the following year, and when old enough was sent to school at Northampton House, Denmark Hill, London, S.E. His schooldays over, he was placed under his uncle, who was at that time an engineer on the Great Eastern Railway, and for two years was taught the principles of engineering. Luckily for horticulture, this work was not to his liking, and in 1862 we find him forsaking it and entering the firm of which he was destined to become the principal. The firm had been founded nineteen years previously by William Hurst and W. G. McMullen, and was therefore at that time in its youthful stage. So assiduously did Mr. Sherwood apply himself to the business that six years after he entered it, viz., in 1868, he was taken into partnership, a happy social feature of his association with the firm being his marriage with the youngest daughter of William Hurst. In 1890 he became sole principal of the firm, a position that he still holds, though most of the arduous duties are now undertaken by his two sons, who are almost as popular in horticultural circles as their esteemed father. Owing mainly to a too close application to business, Mr. Sherwood had a serious breakdown in health in 1901, and on recovering from this was advised to go for a long sea voyage to recuperate. With this end in view he visited Canada and the United States, the Pacific Isles, New Zealand and Australia, and, greatly to the relief of his numerous friends, returned home completely restored to his usual good health. A very pleasing feature of his business career was the celebration at his charming country home, Prested Hall, Kelvedon, Essex, on June 29 of this year, of his fifty years' connection with his firm, some three hundred and fifty guests being present. Although he has given the closest attention to his business, Mr. Sherwood has not been unmindful of others, and his natural and generous activity has found an outlet in many directions. With the late Richard Dean and Mr. William Cuthbertson he was one of the founders of the National Sweet Pea Society, and in 1910 acted as president. His active association with The Gardeners' Royal Benevolent Institution has extended over a period of nearly fifty years, and it is safe to say that this deserving charity has not had a more generous supporter. In 1878 he was elected a member of committee, and in 1883 was appointed trustee, a position he still holds. In 1886 we find him presiding at the anniversary festival dinner and raising a large sum in aid of the funds. In 1897, in conjunction with Sir Harry Veitch and Mr. Ingram, he was responsible for the formation of the Victoria Era Fund of the above-named institution, and also the Good Samaritan Fund in 1899, to both of which he has been a most generous subscriber. At the annual festival dinner of the institution held in the Grocers' Hall this year, Mr. Sherwood, to commemorate the fifty years' connection with his firm, gave the munificent donation of £500 to the funds. The Royal Gardeners' Orphan Fund also claimed his attention, and for some years previous to the breakdown of his health he acted as treasurer, and has always subscribed liberally to its funds. When in 1897 the Royal Horticultural Society decided to institute a Victoria Medal of Horticulture, Mr. Sherwood was one of the recipients of this honour—an honour that was thoroughly deserved. The great International Exhibition, held at Chelsea this year, also claimed his attention, and he was an active member of the Board of Directors that undertook the management and responsibility of that most successful movement. In 1896-97 and 1897-98 he was Master of the Worshipful Company of Gardeners, one of the oldest of the City of London Guilds. Mr. Sherwood is a prominent Freemason, and has just had the honour of London Rank conferred upon him. He is a member of the St. Andrew's Lodge, and also of the Hortus Lodge, being one of the founders of the latter. In his long and active life he has witnessed many changes and improvements in horticulture, not a few of which he has assisted to bring about; and in dedicating this volume to one who has done so much for the craft that he loves, and for the alleviating of the distress of those who have fallen on harsh times, we echo the wish of his large circle of friends that he may long be spared to enjoy the fruits of his labours.

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THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

To Our Readers.—In looking back upon the year that has closed, it is a pleasure to remember the wide and varied correspondence which has reached us from our many readers on subjects of gardening interest, and to feel that a pleasant relationship has existed between Editor and readers, many of whom have freely written of their difficulties and as freely offered the benefit of their knowledge and experience. In the year that has now commenced we trust that many more will write to us about their gardens. To those who have so kindly sent notes of interest during the past year, and also to those who have assisted in making THE GARDEN better known, we tender our best thanks, and to all our readers we wish greater success and happiness during 1912 than they have ever experienced. With this issue is presented an almanack giving the dates of the principal horticultural events of the year.

The Garland Rose.—It may be worth recording that this has been one of the most satisfactory of garden Roses during the past year. Throughout the month of July a hedge of the grand Hybrid Musk Rose in a Berkshire garden was literally smothered with large clusters of fawn-coloured buds opening nearly white, and at the time of writing (January 2) the hedge is bright with orange red hips, even though armfuls have been cut for decorative purposes during the festive season. It is not usual, however, for the hips of this Rose to assume such a high colour as they have done this winter.

Fruit Trees Growing in Grassland.—The thirteenth Report of the Duke of Bedford's Experimental Fruit Farm at Woburn is mainly devoted to experiments which have been conducted there for some years with trees growing in grassland. In all cases the results show that grass has a very injurious effect upon the health of the trees, a fact that has been generally understood for some years past. Young trees seem to suffer more than old ones in this respect, the latter, apparently, becoming to some extent immune from the harmful influence. We hope to refer more fully to the report in a future issue.

Flower Show at Holland House.—Fellows of the Royal Horticultural Society will rejoice to learn that the great summer show of the society will this year again be held in the beautiful grounds of Holland House on July 2 and following days. It is idle to object, for the fact remains that in fine weather the open-air shows at Holland House were the most attractive and delightful of all the exhibitions of the society. The experiment of holding a great midsummer flower show in the huge building of Olympia was anything but a success.

Apart from the excessive heat, the building and its surroundings were much too ungainly to enable any floral arrangement in it to be really beautiful. With no Temple Show and the International Exhibition in Chelsea Hospital Grounds hardly a society's or Fellows' exhibition, it will be no matter for surprise if the minds of Fellows turn with feelings of profound gratitude to the Dowager-Countess of Ilchester for her kind consent to allow the summer exhibition to return again to Holland House.

The Winter-flowering Jessamine and Ivy.—*Jasminum nudiflorum* is well worth a place in any garden, for it flowers in midwinter when outdoor flowers are scarce. It is usually planted against a wall; but quite recently an effective method of open ground culture was noted. In company with Ivy it had been planted to grow over an old tree butt, and the long, slender, flower-laden branches of the Jessamine were intermixed with the Ivy in such a manner that the mass of Ivy appeared to be studded with golden blooms. The same combination was also noted on an old wall, where both plants were allowed to grow freely, the Ivy having assumed its bushy form.

Epimediums in Winter.—Looking through the garden on Christmas Day, we were pleased to observe that there were still some pretty leaf-colouring effects. The Epimediums were specially good, their bronzy leaves having lost none of their colouring, despite the wet and stormy weather which prevailed for so long. The pleasing form of the foliage is also an attraction, and the plants come in excellently for the decoration of the table. They look well by themselves, and their presence along with Chrysanthemums and other seasonable flowers is highly pleasing. *E. perralderianum* is perhaps the most useful on account of its taller stature, giving longer stems, while the leaves are also good in colour.

A Free-flowering Stove Climber.—For many weeks past a plant of *Ipomoea Horsfalliae* Briggsii, an old, well-known stove climber, has been covered with rich crimson blossoms in the Victoria Regia House at Kew, where it serves to show that for a winter-flowering plant for the roof of a tropical house it is still one of the best plants obtainable. Once established it does not give a great deal of trouble, for if cut back annually and a few of the summer shoots are trained to cover the available space, the remaining shoots may be allowed to hang naturally from pillar or roof, and flowers will appear from almost every leaf-axil. Although the best results are obtained from specimens growing in well-drained borders of good soil, fine plants are sometimes seen growing in large pots, any deficiency in the amount of soil being made up by extra feeding.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Tea Roses on New Year's Day.—When making a friendly call on Mr. Prince of Longworth, I was greatly surprised to see many Tea Roses in flower outdoors. Among the best were White Maman Cochet, Souvenir d'un Ami and Mme. Jules Graveraux. Such Hybrid Teas as Mme. A. Chatenay and Arthur R. Goodwin also carried a few blooms. Best of all were some lovely blooms of W. R. Smith. This variety, somewhat like White Maman Cochet, is as yet underrated. When better known it will be widely cultivated. There is some doubt as to which class it belongs. Some growers list it as a Tea, and others as a Hybrid Tea.—C. W. B.

Gold Medal Awards to Roses.—The Rev. J. H. Pemberton reiterates his assertion that gold medal Roses may be, and not infrequently are, unworthy of the awards made to them. Nothing more conclusive could be offered against the making of such awards. It is very well to excuse such awards on the ground that they are made to what just at the time seems to be the best new or seedling Rose presented; but the general public, not familiar with that admission, are apt to be guided by traders' statements that such ones are gold medal Roses, and therefore merit all possible distinction, and perhaps price. Would it not be far wiser to follow the practice of the National Sweet Pea Society and make no awards to new varieties until tested by a season's growth? The National Rose Society may have no trial-ground for such purpose, but surely the Royal Horticultural Society would allow such trials as may be needed to be carried out at Wisley, where Roses of all sections do wonderfully well. Probably, after such tests were undergone, gold medal awards would be fewer.—A. D.

Rhus Toxicodendron in Canada.—Although I have noticed one answer from this side of the ocean to your correspondent on the question of *Rhus Toxicodendron*, I am tempted to add some words upon the subject. I note that, according to your first correspondent, it is being sold at home as *Ampelopsis Hoggii*. It is no relation to the *Ampelopsis*, though in some points it might at a casual glance be mistaken for one. The *Ampelopsis* belongs to the Grape Vine family, and is represented in the wild state by *Ampelopsis quinquefolia*, whose leaves have from three to seven (but generally five) leaflets, oblong lanceolate and sparingly serrate. *Rhus Toxicodendron* belongs to the Cashew family, and is one of the Poison Sumachs. Its leaves are of three leaflets, are more ovate, downy, notched and sinuate. These questions of botanical accuracy are of moment, for it is important that so noxious a plant as this *Rhus* should not be allowed to pose as a harmless *Ampelopsis*. The poison is not a temporary and light matter like that of the Stinging Nettle. The rash which it produces over face, hands, arms and legs is of an inflammatory nature, and recurs for three years in some cases. As a doctor's wife I can speak with authority about its very bad effect upon many people's constitutions. My husband's brother and his wife brought trails of it home one day from the woods under the impression that it was the *Ampelopsis*, and their botanical expedition cost them three weeks in bed! We employ people to go and cut it away

and root it out when it is found near country houses.

—R. J. ELLA BAINES, Toronto, Canada.

Bottling Pears.—Can any reader give me any information about bottling Pears? I find that several weeks after the fruits are bottled, the bottles burst. The system adopted is to bring the fruit nearly to the boil in the bottles, and then seal with screw tops. This way is very satisfactory with everything but Pears.—M. F. H.

Euphorbia Wulfenii.—After several years of disappointment, exactly corresponding with a preceding cool, rainy summer, there is a grand promise of bloom on this monumental plant, clearly showing its need of a dry, warm season in which to ripen up well in preparation for flowering. On some plants nearly every shoot shows, by the point now crooking downwards, that there is a bloom coming. The display in May should be grand, and is already a pleasure to look forward to. It would be interesting to know if—as I fully expect—this observation can be endorsed by others who grow this grand plant.—G. JEKYLL.

Cypripedium insigne.—During December and January, when flowers for house decoration are so scarce, a few pots of this fine old *Cypripedium* are a valuable possession. With four or five blooms and some foliage whose colour closely associates with their own, such as that of the variegated *Eleagnus*, *Cassinia* and *Golden Privet*, room bouquets may be made that are not only of unusual and distinguished appearance, but that will endure, with due refreshing of the water, for from three to four weeks. I do not in general care for shrubs with variegated leaves, except for special treatment in garden colour-schemes, but always have some bushes of the *Eleagnus* and the *Privet* for their usefulness for winter cutting.—G. J.

Coronilla glauca.—Before *Cytisus racemosus* became so universally grown for market and for general decorative purposes, this *Coronilla* was much more popular than it is now, and was to be met with in greater or lesser numbers in nearly every garden. The combination of pretty glaucous foliage and clear yellow flowers is very effective, and a well-flowered example of this *Coronilla* is most pleasing. The "Dictionary of Gardening" gives its flowering period as May to September, but it is now blooming freely, and has been for some time. It is a native of the South of Europe, and little more than protection from frost is necessary to its well-doing. There is a variegated-leaved form, but it is not often seen now.—H. P.

Primula malacoides and P. Forbesii.—Some time ago there appeared in THE GARDEN an article pointing out the usefulness of the above *Primulas* for cutting and decorative purposes, and also drawing attention to the easy way in which these could be grown from seed. I would like to give my experience in regard, first, to *malacoides*, of which I have found there are two distinct forms, one which is practically devoid of scent, and the other the leaves of which are strongly Pine-apple scented. The former is much smaller in flower, less vigorous in habit, and, so far as I have seen, does not seed. The other, which is more robust in growth, carries much larger flowers, and the leaves, especially when crushed, emit a strong Pine-apple scent. This form seeds readily. With regard to *Forbesii*, I note in my collection two very distinct colours, one a light lilac and the other a deep magenta which is catalogued as *rubra*. I send you the two forms of *malacoides*, and you can verify for yourself my statements

regarding them. I also send you the two colours of *Forbesii*.—JOHN MACWATT, Morelands, Duns [The flowers sent fully bear out Dr. MacWatt's statements.—ED.]

The Demand for Alpine Flowers.—From a large trade cultivator of alpine flowers I hear of a steadily-increasing demand for alpine flowers. This is having the effect of making it difficult to maintain a stock of the slower-growing genera and species, with the result that stocks of these, often among the finest of the alpine flora, are being depleted. I was interested to learn, for example, that even the *Gentiana* is getting scarce in the trade in good plants, and the purchaser in search of this lovely flower will not be content with a small crown or two, but covets a good clump.—S. ARNOTT.

Rex Begonias as Wall Plants.—Are not these ornamental subjects being a little neglected nowadays? When properly grown they are highly effective with their handsome leaves, and I see them occasionally employed in a very attractive way on the back wall of lean-to houses devoted to stove Ferns. One of the best effects I have seen of the kind was in a Liverpool garden, where a large stove had the back wall covered with wire-netting, through which were growing *Rex Begonias*, *Selaginellas* and choice Ferns. The wall looked exceedingly well, and I was reminded of it by seeing a somewhat similar arrangement in a smaller garden the other day.—A. M. D.

Plunging Roman Hyacinths.—Once again I have satisfied myself that the instructions so frequently given to plunge Roman Hyacinths, after potting in beds of ashes or Coconut refuse, so as to keep them in the dark, is absolutely unnecessary, and so is hard forcing to induce them to flower by Christmas. For some years now I have simply potted the bulbs towards the end of August or quite early in September, and placed them in a cool greenhouse. There they root readily enough, and as the nights get colder and a little fire-heat is given, they push up freely. In this way the earliest blossoms open in the first or second week in December, and by Christmas they are in good condition. What is more, the plants are far sturdier and more healthy-looking than those which have been hard forced.—P.

Out-door Flowers in Ireland.—As evidence of the extraordinary mildness, so far, of the present winter in this locality, it may be of interest to record that on December 31, in my garden here, I had in bloom the following: Christmas Roses, Polyanthus (in profusion), Auriculas, Winter Gladiolus, Chrysanthemums, Stocks, Wallflowers, Violets, Aubrietia and Hepatica. The Winter Jessamine was in full bloom. There was a mass of *Laurustinus* and, more remarkable still, a row of Ivy-leaved Geraniums, not removed in autumn, were still blossoming freely. On a sheltered wall there were blooms of a *Gloire de Dijon* Rose, an old Monthly Rose in another corner steadily pushes out a bud or two, and even a W. A. Richardson Rose tries to show its colour. The Snowdrops and Crocuses were all well above ground together with masses of Daffodils and other Narcissi of sorts. Old roots of yellow *Calceolarias*, from which a stock of cuttings were taken in late autumn, were flourishing gaily in the open. Of course, we shall get a set-back yet before spring opens, but it is pleasant to see such life in the garden at this generally dead time of the year.—S. A. W. WATERS, Stillorgan, County Dublin.

A Dwarf Shrub for Midwinter.—The value of such a shrub as *Olearia nummularifolia* is even more recognisable in midwinter than at any other season, and as this is written in the closing days of the year, several small bushes in my garden are very pleasing indeed. It is a slow grower, and therefore the more useful in small gardens, and plants not less than seven years old from cuttings are only about two and a-half feet high on dry soil. They are very pretty indeed with their small, thick, hard, glossy leaves closely set on the upright bushes. At this season there is a golden tinge about the green leaves which is particularly pleasing. It is not the best of Daisy bushes as a flowering plant, yet it ranks high as a foliage one.—A. M. D.

An Early-flowering Christmas Rose.—*Helleborus niger altifolius* has been in flower here since early in December, and it makes one regret that it is so comparatively expensive that it cannot be purchased in clumps without a considerable outlay. Yet it is so handsome and so much ahead of the ordinary *H. niger* that it is worth purchasing. It is one of the finest of all Christmas Roses, growing taller than the others, and bearing very large and handsome white flowers, which are tinged with pink, although this does not show so much on blooms which are covered by glass.

Late Flowering of Winter Heaths.—The prolonged period of wet weather we have experienced in the later months of 1911 has had the effect of retarding *Erica mediterranea hybrida* longer than usual, and at Christmas it could not be called open, although it had been laden with sprays of flower in bud for some time. A good deal, however, seems to depend upon the position, as I observe that a plant of *Erica carnea alba*, on a higher and more exposed place, had a good deal of flower open a week before Christmas, while another of this white Heath, close to the plant of *E. m. hybrida* referred to, has not a bloom fully open. Yet I have had the latter open in the same spot in early November more than once.—S. ARNOTT, *Dumfries*.

Dombeya Mastersii.—The genus *Dombeya* comprises some thirty species of handsome evergreen shrubs or small trees, all of which are natives of Africa or the Mascarene Islands. It is unfortunate that they are not more generally cultivated. A species worthy of attention is *D. Mastersii*, of which there is a fine specimen now flowering in the Temperate House at Kew, where it is planted out in a border. The fragrant pearl white flowers, about an inch in diameter, are produced in axillary corymbs towards the end of the loosely-spreading branches; the leaves are heart-shaped and velvety, from 3 inches to 6 inches long and 2 inches to 5 inches wide. It is a most valuable plant for winter decoration, as it commences to bloom during October and continues through the winter and early spring months. This *Dombeya* will thrive and flower freely under ordinary greenhouse treatment, and may be successfully grown in large pots or tubs, using a compost of rich sandy loam, to which a small proportion of peat or leaf-soil should be added. After the flowering period is over, the plant may be pruned hard back, when it should be placed in moist heat to induce it to break freely. Cuttings of firm young shoots will root when inserted in sandy soil during March and April. They require to be placed in a propagating-case with bottom-heat. *D. Mastersii* is a native of Tropical Africa.—W. T.

TREES AND SHRUBS.

CAMELLIAS AS OUTDOOR SHRUBS.

ONE of the best hardy flowers that was in full bloom with us towards the end of November was the fine single Japanese *Camellia Sasanqua Mikiniki*. This, both on a wall and in the open, was flowering profusely, and it is therefore very valuable, as scarcely any other shrub was then in bloom. The plant had just previously experienced 8° of frost and showed no signs of injury. Camellias, as a rule, are treated much too tenderly. Out of the many hundreds in these gardens, not a plant has been damaged by the great heat of last summer, nor by the great snowstorm and frost last April. At many places in Kent, Sussex and Berks I know of fine plants, some of which have been planted for some years; and there are several plants here which bear thousands of blooms in a season and look in better health

surrounding soil, this will be found to suffice at the time of planting, because in subsequent years the soil can be opened and some of a fresh and sweet nature added. The soil should, however, be made very firm by ramming with a wooden instrument, and strong stakes to prevent swaying by the wind should be provided.

There are a good many varieties that do really well in the open, and many persons know how well the foliage looks among other more common kinds of shrubs. *C. Donckelaeri*, spotted and with fine yellow stamens, is a wonderful free-flowering variety, and seeds with us on walls and in the open. *C. reticulata* is the queen of Camellias, with very large flowers of rich pink and sometimes 8 inches or 9 inches across the bloom. The foliage is also quite distinct from that of all other Camellias. It flowers somewhat later than the majority. *C. fimbriata alba*, *C. imbricata*, Maiden's Blush, *C. latifolia*, *C. anemonæflora*, *C. japonica*, *C. alba plena*, *C. Grysii*, *C. Kelvingtonii*, *C. Sieboldii* and *C. Lady Clare* are also good. Camellias when growing require plenty of water and stimulants. Good liquid



FLOWERS OF A LITTLE-KNOWN GREENHOUSE TREE, *DOMBEYA MASTERSII*.

than many to be seen under glass. It is necessary, of course, to plant them in a somewhat sheltered position, and that sheltered position can, as a rule, be found; if not, a shelter can invariably be made by using some well-known hardy plants of good dimensions for the purpose. I believe that one *Camellia* here, which is about seventy feet in circumference, has been planted nearly fifty years, so that it has borne the brunt of a good many storms, and is as fine a plant as could be seen in the country. It has the shelter of the mansion on one side only. This alone should stir hardy plant lovers to try them.

They need good sweet soil of fair depth, and it should always be thoroughly trenched previous to planting. A great deal of peat is often thought necessary, but this is a fatal mistake, as if once it is allowed to get dry much injury may be looked for. If a third each of peat and leaf-soil, with a little manure, be added to the

cow-manure is one of the best, and at intervals a good watering from the soot-tub is beneficial, as also is a good dusting of soot and bone-meal worked into the soil as a top-dressing. Large plants require top-dressing annually, and this in no half-hearted manner. When plants have become ragged, perhaps through stress of circumstances or bad health, they should be taken up and shaken out; that is, get all the old soil away that is possible and replant in new sweet soil and on a well-drained spot. Cut all the branches hard in, and then during April, May and June—in fact, all the dry months—spray the hard wood two or three times daily. Later you will find numerous little growths appearing, and in a short space of time a nice new, well-shaped plant can be made.

Seedlings should be grown on liberal terms, when they will make very satisfactory plants in a few years. Copious supplies of water and liquid manure should be given all through the growing season.

The flowering season commences with *C. Sasanqua* and finishes with *C. reticulata*.

Leonardslee Gardens, Horsham. W. A. Cook.

HYDRANGEA PANICULATA.

A GLANCE at the illustration on page 5 will at once show what an admirable subject *Hydrangea paniculata* is when grown in a large, spacious bed. This widely-grown shrub is met with under varying conditions; sometimes it is grown in pots or tubs for the embellishment of the conservatory,

from 6 inches to 9 inches, or sometimes more, in length and 6 inches wide, and they are made up of large flowers with yellow petals and crimson stamens, which form a wonderfully showy combination. The leaves of the species are also pretty, for they are bipinnate, up to 9 inches long, and composed of numerous tiny leaflets. The Kew plant is about 25 feet high, and is planted in loamy soil, the wall to which it is attached having a west aspect. For the Southern Counties it is a plant which might be used for a high wall more frequently than it is at present, for few leguminous

Evergreen, Turkey and American Scarlet, as well as the English, may be planted. Few trees cast denser shadows than the Chestnuts. The double white and the scarlet-flowered are lovely, and, where space is ample, one or two Horse Chestnuts may be planted. The Chestnuts are clean trees; that is, they cast their leaves quickly, also their fruits, and during the summer-time rarely shed anything after the flower-husks have fallen.

Groups of the common Lilac and Mock Orange are ornamental and serviceable. In many instances it is possible to plant *Ampelopsis* and *Lyas* and train the branches to wires or rough stakes, and so form a friendly shelter from the scorching sun's rays in summer-time. In many gardens in the suburbs of London, and notably in and around Romford, I recently saw many such shelters created in this way and by utilising trellises. Great care must be taken when lifting and replanting, and if dry it is advisable to water occasionally after the planting is finished. Stake securely and take every care of leading shoots. B.



A FLOWERING SPRAY OF *CÆSALPINIA GILLIESII*, A LITTLE-KNOWN HARDY SHRUB.

and it renders a good account of itself as a solitary specimen when allowed to grow almost unchecked in a sheltered spot. Although not fastidious in regard to soil, yet it prefers one that is rich and loamy, and if plenty of decayed cow-manure can be given as a top-dressing in the growing season, so much the better. Failure in *Hydrangea* culture, whether in pots or in the open, is often due to poverty of the soil, unripened wood and insufficient moisture. When grown outdoors the plants are at their best during September. In order to keep these plants dwarf and within bounds, it is necessary to prune rather severely before growth commences.

CÆSALPINIA GILLIESII.

VERY few woody plants from South America are suitable for outdoor culture in the neighbourhood of London, yet this showy subject may be grown quite well against a wall. For many years past it has been a noticeable specimen on the front of the Museum, near the Palm House, at Kew, and during the last few years a few inflorescences have appeared in September. Last year it was more conspicuous than ever, for, owing, no doubt, to the sunny summer, flower-heads appeared from the point of almost every branch. The inflorescences are, when mature,

species which may be grown out of doors are of such an interesting character. D.

SHRUBS AND TREES FOR SHADE.

DURING the past summer, shade in the garden has been more appreciated than for many years. The shelter of a single tree or branching shrub has been eagerly sought; and as there are not many trees or shrubs in villa gardens which can be made good use of by the owners during very hot weather, I will name a few kinds that may be planted at this season. Where the maximum amount of light and air is required in the winter-time, deciduous specimens may be planted; then their leafless branches will not materially obstruct the light. Indeed, some kinds of deciduous trees are much more effective in summer than are the evergreens. How very beautiful a single specimen of a Weeping Ash, Birch, or Beech is when planted in the right position! There is not much labour or skill necessary in the training, seats can be arranged under the pendulous branches, and even in winter-time the tree is highly ornamental and never obstructive or unsightly. The Laburnum, Guelder Rose and Mountain Ash form a trio suitable for any pleasure ground. Then, for larger gardens, the white and scarlet Hawthorns, and Oaks,

THE FRUIT GARDEN.

NEW RASPBERRY PLANTATIONS.

IT is really astonishing that cultivators will bestow much labour and attention on old, worthless plants year after year without attempting to renew them. It does not cost more nor entail more labour to attend to strong, fruitful plants than to weakly ones. Indeed, the latter cause the most trouble and expense without any adequate return. If possible, the new plantation should be made on fresh soil, that in which Raspberries, Currants and Gooseberries have not previously been grown for some years. Sometimes cultivators take up young canes from old plantations. This may and should be done in preference to continuing the old plantation; but the best policy is to buy young stock from a nurseryman. Although these plants are surface-rooting to a great extent, it is quite necessary to trench, or at least very deeply dig, the soil. Canes of medium strength are the best to plant, as they are usually well ripened. Very strong canes may look tempting to the inexperienced cultivator, but they are generally pithy and immature.

I prefer to grow Raspberries in rows 5 feet apart, each cane being 6 inches asunder; then every one will get sufficient light and air to ensure the proper ripening of the wood even in cool summers. If planted in clumps, the latter should be 4 feet apart each way and confined to three canes in each clump. The roots are very fibrous, so planting must be done while the soil is comparatively dry; then it can be well worked in among them. Only lightly tread down the soil at the time. In any case the canes must be cut down to half their length at planting-time, and they may with advantage be cut still lower. If the canes are planted in rows, strong posts and wires should be fixed at the time, so as not to disturb the roots afterwards. If grown in clumps, one stout stake will be sufficient for each, but the canes ought not to be tied too closely to them. If the stakes and posts are tall enough, they will also serve the purpose of supporting nets when the fruit is ripening. Immediately the planting is finished, a surface mulch of littery manure must be put on. Avon.

CHRYSANTHEMUMS.

JANUARY NOTES.

DURING this month the exhibitor will be anxious to get all cuttings put in that are to produce first-crown buds, mainly on unstopped plants. The cuttings inserted now will form roots more quickly than those put in during the early days of December, and consequently there will not be much danger from weakening through being in the propagating-frame too long.

Rooted Cuttings.—Those cuttings first inserted must now be frequently examined, and taken out of the propagating-frame as soon as sufficiently rooted. They should be transferred to a cool frame, and there gradually inured to more air, and be kept well up to the roof glass so as to have all the light possible. Very careful watering will be necessary all the time, as if the soil gets very sodden, the cuttings, however many roots they may possess, will be badly checked, and if there are only a few roots the young plants may die. Maintain the soil in an even state of moisture, and before it becomes very dry give water; in this way the soil is kept sweet. Frequently a nice light spray from the syringe will do more good than the watering of the soil, unless, as above stated, the latter is getting quite dry. On no account, however, must the leaves be syringed after midday at this season.

Soil for Potting.—This should always be prepared in good time; if the ingredients are mixed a few weeks in advance of the time they are required for use, the whole will be in the best possible condition. Fibrous loam two parts, sweet leaf-soil one part, and rotted manure and coarse sand one part will form a suitable general compost. No artificial manures must be used at this potting. One crock will be sufficient to place in each pot, and on it a small quantity of the fibrous part of the compost and some half-rotted leaf-soil should be put. When this is done, the roots ramble freely round the bottom of the pot, and good, thick leaves result. The cuttings of single-flowered varieties and those of the incurved section must be put in during this month, in a similar way to that advised in December for Japanese sorts.

Varieties for a Beginner to Grow.—The following is a select list and the number of plants for a beginner in Chrysanthemum culture to grow: Mrs. A. T. Miller, three, white; White Queen, two, white; Reginald Vallis, two, purple; Frances Jolliffe, three, yellow, striped rose; Master James, three, chestnut, gold reverse; Bessie Godfrey, two, canary yellow; Rose Pockett, two, old gold and salmon; Evangeline, two, white; Mrs. W. Knox, three, yellow, suffused bronze; Mary Poulton, two, pink; Mrs. L. Thorn, three, yellow; Master David, two, crimson, gold reverse; Kara Dow, two, gold and bronze; Countess of Granard, two, yellow and bronze; Lady Edward Letchworth, two, yellow; Mrs. R. Luxford, two, Indian red, gold reverse; Laura Hill, two, terra-cotta; Edith Smith, three, white; Mrs. Charles Penford, two, yellow; and Pockett's Crimson, two, crimson.

Incurved—Clara Wells, two, cream and bronze; C. H. Curtis, three, yellow; Buttercup, two, yellow; Embleme Poitevine, two, light yellow; Lady Isabel, two, blush; Romance, three, yellow; Mrs. Barnard Hankey, two, bronze; Mrs. G. Denyer, three, pink; Pautia Ralli, two, buff; W. Biddle, two, yellow and bronze; Edwin Thorp, three, white; and Ialene, two, rosy violet. Singles—Edith Pagram, two, pink; Mensa, three, white; Mary Richardson, three, salmon; Metta, two, magenta; Sylvia Slade, two, rose; White E. Pagram, three; and Altrincham Yellow, two. AVON.

ROCK AND WATER GARDEN.

HARDY CYCLAMEN AND THEIR CULTURE.

IN almost every garden there are positions not suited to the requirements of any other race of plants, but in which hardy Cyclamen would thrive. For instance, they are never happier than when growing beneath the overhanging branches of a big tree or in a shady corner in the rock garden, where perhaps only Ferns will consent to grow, and they well repay any little extra attention by producing their beautiful little blooms during a period of the year when there is a scarcity of flowers, sometimes

planted, and during the dull days of the year prove a great attraction, the russet brown fronds providing a charming setting for the beautiful and quaint little blossoms.

Cyclamen are best propagated by means of seed, which may be collected in plenty from the plants, and should be sown as soon as ripe in pans of light soil and placed in a cold frame. The seedlings will appear within six weeks, and when large enough should be potted singly into small pots, and they will then soon make nice plants large enough to be planted in their permanent positions. The following are the best-known and more desirable varieties:

C. Coum.—A beautiful little species sometimes in flower by Christmas, and if only for this reason is worthy of a place in every garden. It has small, round, dark green leaves of a leathery texture, which form a nice contrast to the red blooms.

C. europaeum.—Variable in colour, but more often dull red, this variety extends its flowering season from July to November. The flowers are larger than in most species and more nearly resemble those of *C. persicum*, while the leaves are prettily marbled with grey and white.

C. hederaceifolium.—A beautiful variety, the leaves of which are not the least delightful feature of the plant, these being large and shaped like the Ivy, as the name indicates, while they are marbled in a most beautiful manner with shades of grey and light green, and form a very pretty feature of the



A FINE BED OF HYDRANGEA PANICULATA. (See page 4)

flowering before the Snowdrop. Cyclamen thrive best when planted in a mixture of loam and leaf-soil, to which may be added a portion of decayed vegetable matter, and an annual surface dressing of leaf-soil or decayed manure may contribute to their welfare. Unlike the Persian Cyclamen, the bulbs should be covered when planting and be given a position where they may remain undisturbed for years, for this is a great factor in their successful cultivation. At Kew many of these dainty little Cyclamen are grown on the mound near the Palm House, where hardy Ferns are also

rock garden during the dark portion of the year. The flowers appear in September and October and are light red in colour; but there are some very pretty pink and white forms of the species that are well worth cultivating.

C. vernum.—This somewhat resembles *C. Coum* and flowers at about the same period of the year. The leaves are small, round, and dark green in colour on the upper surface, but often of a dull red beneath. There is a pretty white form of this variety.

RALPH E. ARNOLD

The Gardens, Cirencester House, Cirencester.

THE ROSE GARDEN.

THE YELLOW SCOTCH ROSE.

THIS little gem is rarely seen except in old gardens. Why, I do not know, for it is a flower of grace and beauty both in form and colouring. Flowering as it does in May, even before the Austrian Briars, the Yellow Scotch Rose is always welcome, heralding, as it were, the coming of Queen Rosa. Perhaps the nearest in form is the Austrian Briar *Harrisonii*, but it is perfectly distinct, as may be seen by its formidable prickles. The Yellow Scotch Rose has flowers of a rich sulphur yellow, and it is very bright when developed into a big bush or grown as a hedge plant. It is readily propagated by the numerous underground suckers, which come up all around, thus differing from the

comparatively dwarf habit, and the variety under notice is also of low stature. The plants in question scarcely exceed 2 feet in height, yet their fruits are larger than those of many tall-growing species. The fruits are from 1 inch to 1½ inches long, and about one-third of an inch wide in the widest part. They narrow rather rapidly towards the apex, and are terminated by long calyx lobes. During early summer it is also a conspicuous object, for at that time its pretty deep pink flowers are very attractive. Both *R. alpina* and the variety under notice are suitable plants for the rock garden as well as for the open border, and garden-lovers would do well to give them a trial. D.

DUAL VARIETIES OF ROSES AS PILLARS.

It is a common complaint in regard to our early summer-flowering rambler Roses that they leave

many of our strong-growing Roses as dwarfs. I refer to such sorts as Hugh Dickson, J. B. Clark, Mrs. Stewart Clark and Johanna Sebus. Just plant them as pillars, alone, or with, say, Carmine Pillar, Una, Flora, Electra and other early sorts, and they would not fail to give us some delightful effects. I need not give details of various blendings, for they will suggest themselves to anyone who will take the trouble to study the growth of the various kinds.

There is another phase of this subject, and that is training the fast growers around three poles formed as a tripod. We may still plant two sorts together, such as White Dorothy and the old Crimson Monthly, and there would be in a couple of years a lovely pillar of scarlet and white bloom for autumn effect. Now that climbing and rambler Roses are multiplying so rapidly, this dual planting would solve the difficulty some of us encounter as to how to dispose of all the beautiful sorts now available. In preparing holes for these Roses, let them be fully 2 feet 6 inches deep and 3 feet square. This would be sufficient for the two varieties.

ROSE SOLEIL D'ANGERS.

This marvellous sport of Soleil d'Or bids fair to become very popular on account of its unique colouring. It bears a great resemblance to Juliet, although perfectly distinct, and is not so refined a flower. But the back of the petals, which are of old gold, are almost identical to that popular variety. The inner petals are a rich mulberry crimson, whereas those of Juliet are a lovely rosy carmine. The shape of the flower of Soleil d'Angers is quite confused, more after the style of Soleil d'Or. Then we have another lovely gem in Beauté de Lyon, one of M. Pernet-Ducher's latest. All three Roses named have the growth, habit and fragrant foliage of Soleil d'Or. Beauté de Lyon has a most unique colour which is difficult to describe. Perhaps coral red, shaded orange yellow, is sufficient to give readers an idea of its lovely shade. With me the flowers come rather small; but then I must admit the plant has not become established yet, and the flowers are certainly not representative of the variety. Hybridisers should obtain this Rose, for it yields pollen freely; so also does Soleil d'Angers. If the plants are somewhat ill-shaped, they amply atone for this by their beautiful colouring and in most cases delicious fragrance, and they will be grand additions to the Briar garden that will be a feature of every rosery in the near future.

ROSE GEORGE C. WAUD.

FEW of the newer Roses stood the test of last season better than the above-named variety. It is without doubt one of the best productions of the eminent raisers, Messrs. A. Dickson and Sons, Newtownards. Its colour is one that positively dazzles the eye, and no wonder that there was quite a clamour for it early in the season. Rosarians are getting a little tired of the very many semi-double Roses put on the market, and the last remarkable summer tested their most unmercifully; but in George C. Waud we have a flower that will endure, and its glowing orange carmine seems to revel in the bright sunshine. It is a good grower, abundant bloomer, and suitable both for the garden and the show-box, and also for pot culture.

One is glad to see raisers producing Roses with good rich colours—I mean sorts such as George C. Waud, George Dickson, Edward Mawley and Leslie Holland; for although the creams and orange-shades are most delightful, they rather outnumber the dark-coloured novelties.



FLOWERING BRANCH OF THE YELLOW SCOTCH ROSE.

Austrian Briars, which do not seem to possess this tendency. All the Scotch Roses are worthy of a place in our gardens, and they are more readily procurable from the Scotch nurserymen, although some English firms grow them. They make admirable hedges 3 feet to 4 feet high, and provide a perfect thicket of growth. Although they seed freely, they seem difficult to hybridise. I have made several attempts, but could never induce one to seed. When artificially fertilised, a hedge of the Yellow Scotch, with the perpetual-flowering Scotch Stanwell Perpetual interspersed alternately, would be a beautiful feature. P.

ROSA ALPINA PYRENAICA.

This Rose was very showy late last autumn in the border which contains the collection of species of Rosa near the Pagoda at Kew, for it was bearing a large number of coral red fruits, which stood out conspicuously among the fruits of many other kinds near by. *R. alpina* is a European species of

a great vord when their flowering season has terminated, and unless judicious care is exercised when disposing the Roses upon arches, pergolas or pillars, the positions they occupy will be most uninteresting at a time of year when all should be contributing their part to the general effect of the Rose garden. Now this may to some extent be obviated by planting a perpetual-flowering sort with the early one. There is no objection to this arrangement from a cultural point of view, because we can easily provide both plants with sufficient root space, and it will only mean preparing two good holes for their reception instead of one. There are numbers of Roses grown nowadays that are so well suited for growing in pillar form which are also perpetual-flowering, and would blend beautifully with the more rampant early bloomers. I have seen that delightful Rose Bardon Job mingling its massive, almost single, flowers of such wondrous rich colouring with early summer varieties, such as Aglaia. Speaking of pillar Roses, I think we lose much by treating

**COLOURED PLATE.
PLATE 1442.**

BORDERS OF ANNUAL FLOWERS.

ALTHOUGH much has been done during recent years to bring the value of hardy and half-hardy annual flowers before the public, there are many otherwise good gardens where only a very few kinds are grown. The reason for this is by no means plain. For creating a brilliant and beautiful display of blossom during the summer months at a comparatively low cost, there is nothing to compare with our best annuals, and the accompanying coloured plate proves beyond a doubt that they may be successfully utilised for furnishing mixed borders. But it is, above all else, most essential that good strains of whatever kinds are used be selected; much of the bad or indifferent reputation that has hindered the cultivation of annuals in the past has been due to the fact that cheap, unreliable strains have been purchased. The coloured plate presented with this issue represents a charming scene in the gardens of Lord Northcliffe at Sutton Place, Guildford. The whole of the annuals and biennials seen were raised from seeds supplied by Messrs. Sutton and Sons of Reading, and it is due to their courtesy that we are enabled to reproduce the plate in colours. The colour-photograph from which the plate has been prepared was taken by Messrs. Sutton and Sons' own photographer during the past summer.

Mr. J. Goatley, the head-gardener at Sutton Place, has been kind enough to furnish the following particulars about the borders that may be seen on either side of the pathway:

"The border illustrated on the left-hand side of the pathway has for the past five years, with one exception, namely, 1909, served as a mixed annual border. In 1909 it was planted with Sweet Peas in clumps. The following year it was dug over in autumn and again in spring (no manure added), and sown with annuals in April, these making a fine display during the summer of 1910. Last year it was dug two spits deep and dressed with lime, and later was given a dressing of soot. It was well worked about in March, and after making it firm by repeated treadings was sown about the second week in April.

The seed was sown in shallow drills in irregular spaces (marked out beforehand), and the following varieties of annuals were employed: For the background—Tall Larkspurs, Sutton's Stock-flowered Rosy Scarlet and Blue; *Lavatera rosea splendens* and *alba splendens*; annual Lupines, *L. hybridus atrococcineus*, Tall Dark Blue, yellow *Menziesii* and *mutabilis*; *Clarkias* Double Salmon, Carnation Flaked Pink and Firefly, annual *Chrysanthemums* Morning Star and Eastern Star.

Centre and foreground.—*Godetias* Double Rose, Duchess of Albany and Lady Albemarle; *Linum grandiflorum rubrum*, dwarf Larkspurs and Sweet Sultan, Candytufts Sutton's Improved White Spiral and Carmine; *Mignonette* Sutton's Giant, *Nigella* Miss Jekyll, *Phacelia campanularia*, *Collinsia bicolor*, *Limnanthes Douglasii*, *Convolvulus minor* Blue (dark) and Sky Blue, *Eschscholtzias crocea* and Mandarin, *Gypsophila elegans* and *Dimorphotheca aurantiaca*. These were arranged so that the colours harmonised, and a natural effect was obtained by placing some of the taller varieties near the foreground, and *vice versa*.

The seedlings were thinned very early, and two other thinnings were made at intervals. Each plant was given ample room for development, the dwarfier kinds being allowed a space varying from 6 inches to 1 foot, and the larger varieties from 1 foot to 18 inches. Where necessary, each plant was staked with small Hazel sticks, the ground was frequently hoed with the Dutch hoe, and the plants kept regularly watered in the evenings. The border measures 114 feet in length, and is 9 feet wide.

The border on the right side of the pathway is devoted chiefly to herbaceous *Pæonies*, of which we have a very good collection. They have been planted therein for the past four years. We generally get three crops of flowers from this border. First we have *Narcissus* in several good varieties, such as Sir Watkin, Golden Spur, Emperor, Empress and *Horsfieldii*. These make a good show when associated with the richly-coloured growths of the *Pæonies*, which in due time provide us with the second crop of bloom. Before these cease flowering we commence preparations for the third crop of flowers. This border is of exactly the same dimensions as the one opposite.

The *Antirrhinums* grown here are Sutton's Cloth of Gold, Tall and Intermediate, and Pure White. These are sown in beat in January, grown on, and planted out when ready. *Coreopsis grandiflora* is sown in March and treated the same as *Antirrhinums*. Practically all the remainder are annuals, half-hardy and otherwise, and are mostly sown in frames in March on hot-beds, pricked off when very small, and planted out in April and May. The varieties we use for this border are as follows: *Arctotis grandis*, *Asters* White Ray and *sinensis*, *Clarkias* grown on in pots and planted out, *Coreopsis coronata*, *Cosmos* Miniature Yellow, *Godetia* sown on border, *Nemesias* Tall and Dwarf, *Phlox Drummondii* Salmon Rose, Yellow, and White; *Salvia* Bluebeard, *Statice sinuata hybrida* and *Suworowii*, *Salpiglossis* Blue and Gold, Golden Yellow and Crimson Gold-veined; *Sunflower* Dwarf Miniature, *Stocks* Beauty of Nice, Mauve and White, and Mauve Beauty; and *Tagetes pumilum*.

These are arranged with a view to colour and general effect, and are planted far enough apart to allow of full development, staked where necessary, and treated subsequently the same as those on the opposite border. No manure has been given for the best part of two years, but lime has been added each year."

THE FLOWER GARDEN.

SWEET PEA NOTES.

GREETING.—Throughout the year that is just commencing it is to be my honour and pleasure to talk to the readers of THE GARDEN about Sweet Peas, and it will be my endeavour to give information on cultural matters which will be obviously of more value to the comparative novice than to the experienced grower, while still being of interest to the latter. Suggestions will be made anent varieties of merit; but unless special requests are directed to the Editor, no attempt will be made to compile definite lists, as this is a task that should be undertaken by each grower, who can consult his own tastes in the directions of colour and form. Allusion to the doings of the Nationa-

Sweet Pea Society may be made from time to time as opportunity or necessity arises, and I am hopeful that when the year 1912 has run its course my readers and myself will have become excellent, even though very distant, friends. All may turn to me in cases of doubt and difficulty, since the Editor is good enough to say that space is always at my disposal to reply to correspondents. With these few words I wish my readers a happy New Year and a prosperous one in their businesses and their hobbies, whatever these may be, but especially to those who acknowledge allegiance to the Queen of Annuals, the Sweet Pea.

Retrospective.—I can look back intimately to that great event at the Crystal Palace when a few ardent spirits joined forces to celebrate the bi-centenary of the introduction of the flower into this country. The establishment of the National Sweet Pea Society which followed so closely upon that event is green in my memory, and I am proud that an organisation in whose early formation I was so strenuously connected has succeeded in a manner of which none of us pioneers dreamed.

Introspective.—Is all well with the society now? It is an important question, and it is clear that time alone can answer it fully. The doings of its floral committee have been keenly discussed and criticised, and the ulterior motive has been to ensure the maintenance of success. Whatever may be right or wrong in the management of the society is not for me to decide, but that it has reached a critical period in its history none, I dare venture to assert, will dispute. It is just on the over-weighted side in its financial responsibilities, and the concerted friendly efforts of all its members, as well as its committees, alone will keep it floating satisfactorily.

Prospective.—But let me say at once that I look forward with every confidence. The policy of the committee has always been to spend money to get more money, and in all the years that have gone it has been successful. I know that it is a fallacy to say that what has been must be again, but with the same happy association of the same excellent workers one is entitled to look for even greater success, since experience should have made the powers that be more capable, and perhaps more willing, to grapple with a strong heart anything that may arise. Unanimous loyalty to the committee which the members themselves elect will ensure success, and it should be the endeavour of everyone connected with the society to bring in at least one new member during the ensuing year; more if possible, of course, but at least one, as augmented membership spells augmented funds and augmented funds, give added power for good.

HORACE J. WRIGHT.

THE BEST PLANTS FOR A BLUE GARDEN.

IN these days of specialising, and when the study of colour and effect counts for so much, it is sometimes of help, in view of the beautiful new plants so carefully imported and launched on the market, to consider how a certain effect can be arrived at; and few more charming arrangements of colours can be evolved than a blue border with a little mauve mingled in it.

I think most gardeners endeavour to lay a solid foundation of bulbs and perennials; but for a really good show of flowers it is quite essential to have

annuals, and a good many of them. At the very commencement of spring our border begins with masses of Scillas, pretty clumps of the blue mauve Crocus and Hepaticas, and Chionodoxa Luciliae (Glory of the Snow). *C. sardensis* and others of this genus. The Iris family give us charming early-flowering varieties, such as *reticulata* and *alata*. A mass of *Muscari botryoides* will make the ground quite blue early in the spring before our own Bluebells appear on the scene, but these, of course, are more suited to the wild garden. Of Hyacinths the most beautiful blues exist. The *Pulmonaria* will help to clothe the ground in front of the border; but it is a little difficult to bridge the period when all the spring bulbs are over and before the early summer flowers come to help us out.

Myosotis is a stand-by, and *Omphalodes verna*, backed by grey Lavender bushes, will help us over the worst. Then comes such a riot of bloom from the kingly *Delphinium* to the lowly *Veronica prostrata* that the largest space is filled and runs over. Next in height to the *Delphiniums* come the lovely *Anchusas*, all these flowers the bluest of blue. *Gentiana verna* and *G. acaulis*, though preferring a rock garden, are treasures of colour, and so is the *Lobelia*.

Nigella damascena (the Miss Jekyll variety) is a great favourite of mine, and the delicate-looking *Nemophilas* are beautiful though transitory joys. For the rock garden, a little earlier, Wilson's Blue Primrose is charming, and the *Vincas minor* and *plena* are also delightful for the rockery. The blue Larkspurs are very decorative, and *Commelina cœlestis* is a pretty thing; all these are real blue.

Directly we touch the Iris family we get to tones of mauve and pastel blue. I mix them freely myself, and also the lovely shades of Lavender which one gets by using that plant, the charming *Eryngiums* or Sea Hollies, and the lovely Phlox *canadensis* Perry's variety. For a climber Lady Northcliffe is a lovely mauve Clematis, and so is Lady Caroline Bovill.

In autumn the dark blue mauve Aster makes a great show, also the pale mauve which Frau Fisher of Homberg sends me as Hellblane. There are now a splendid dark and a pale mauve Verbena, which, with *Heliotrope*, make a charming *mélange*. Of course, the very bluest flower for late summer is *Salvia patens*, and the great *Agapanthus* is splendid; but I contend that it is better to have the borders well garnished than to stick too severely to true blue, so I welcome the purple *Viola cornuta*. The Emperor William Pansy and Lord Beaconsfield are, perhaps, a little bluer. I love *Salvia Bluebeard*, which in a cool year grows like a Nettle. Last year it was simply scorched out of the border.

The *Campanula* family is a large one, but the blues are not, as a rule, azure, save the darling

Harebell, and even that is only bluish. The Michaelmas Daisies are a host of lovely mauves. I particularly like *Aster Amellus* and *A. acris*. I have overlooked *Lithospermum prostratum*, which is very blue and makes a delightful carpet quite late. The Gladioli to be recommended are Baron Joseph von Hulot (very late), Kelway's Purple, Persimmon, and I am told Kelway's Mike Lamburn is good. I must not forget the blue Larkspurs and *Aquilegia cœrulea*. I append a list of all the blue and mauve and purple flowers I can remember, in the hope that they may be of use to my friends, should they care to embark on a blue corner, and only hope it may be of service: *Anemone coronaria*, *Aconitum*, *Ajuga metallica*

Kelway's Purple, and Baron Joseph von Hulot; *Heliotrope*, *Haberlea Heldreichii*, *Hepaticas angulosa* and *apennina*, *Hyacinths Grand Maitre*, Bloksburg, King of the Blues, Leopold II., Queen of the Blues, Charles Dickens and Rembrandt; *Irises reticulata*, *alata*, *Xiphium*, *Marie*, Germanica, English Purple, and many others; *Lavandulas spicata* and *alpinus*, Larkspurs, *Lithospermum prostratum*, *Lobelia single* and double, *Lindelia spectabilis*, *Lupinus Foxii*, *Muscari comosum* and *botryoides*, *Mazus Pumilio*, *Myosotis dissitiflora* and *alpestris*; *Morisia cœrulea*, *Nepeta Mussinii*, *Nemophila*, *Nigella damascena*, and *purpurata* (Miss Jekyll); *Omphalodes verna*, Pansies Blue Beard, Diamond, Emperor William and Lord Beaconsfield; *Polemonium humile*, *Parochetus communis*, Pasque-flower (*Anemone Pulsatilla*), *Pentstemon Royal Mantle*, Mrs. Kelway and *heterophyllus*; *Phloxes divaricata*, *canadensis* and Lapham's variety; *Polemonium cœrulea*, *grandiflora* and *himalaicum*; *Primulas cœrulea* and Wilson's strain, *Pulmonaria*, *Phacelia grandiflora*, *Salpiglossis New Emperor*, *Salvias patens* and Blue Beard, *Scabiosas caucasiana* and *japonica*, *Scilla bifolia*, *Statice latifolia*, *Tecophylaea cyanocrocus*, *Tradescantia cœrulea*, *Veronicas dentata*, *amethystinus*, *rupestris* and *prostrata*; *Vinca minor*, *Violets cucullata*, Princess of Wales and Czar; and *Verbenas*. For a wall: *Ceanothus Veitchii* (May), *Gloire de Versailles* (August) and *rigidus*; *Clematisses Jackmanii*, Lady Northcliffe and Lady Caroline Bovill; *Ipomea*, blue (not hardy); and *Plumbago* (can be plunged in summer). Hardy or nearly hardy kinds: *Aster violacea alpinus cœruleus*, *Adenophora polymorpha stricta*, *Galatella hysopifolia*, *Primula pulverulenta*, *Myosotis Ruth Fucher*, *Phlox divaricata subulata lilacina*, *Platycodon grandiflorum*, *Salvia azurea grandiflora*, *Phyteuma orbiculare* and *Violets Berthe Barron*, Liane and California.

VERE GALWAY.

Scilly Hall, Bawtry, Yorks.



A VIEW IN THE GARDEN OF ANNUAL FLOWERS AT GUNNERSBURY HOUSE, ACTON.

crispa, *Anchusa Dropmore* variety, *Aquilegia cœrulea*, *Asperula azurea*, *Asters acris* and *Amellus*, and many others; *Agapanthus umbellatus*, *Anemones apennina* and *blanda*, *Aristea Ecklonis*, *Brodiaea*, *Campanulas carpatia*, *persicifolia*, *azureus*, *glomerata*, *turbinata*, *muralis* and *grandiflora*; *Centaurea montana*, *Commelina cœlestis*, *Cerastigma plumbaginoides*, *Clematisses tuberosa*, *Davidiana*, *integrifolia*, Lady Northcliffe and Lady Caroline Bovill; *Crocuses*, blue in spring and *C. speciosum* in autumn; *Chionodoxas sardensis* and *Luciliae*, *Camassia esculenta*, double Tulip Blue Flag, *Delphiniums* in variety, *Echinops humilis*, *Eutoca viscida*, *Erinus*, *Eryngium azureus*, *dichotomum* and *maritimum*; *Funkia lanceifolia*, *Gentianas acaulis*, *verna* and *bavaria*; *Gladioli Persimmon*,

the space of this article; therefore I propose to deal with hardy annuals, embracing such as can be brought forward in a cold frame only. These types of annuals, it may be noted, but they are not often so alluded to, are lovers of a calcareous soil, thriving better in such than in a soil rich in humus. With a little consideration this may be noted, for most of the readers of THE GARDEN will have observed how well annuals thrive in many seaside resorts where lime is in evidence in the soil. In their native habitats this also applies in many instances. Annuals of this description will also grow freely and flower most profusely in somewhat limited borders. This, I think, all goes to prove that cultivators often err in providing too rich soil for their growth.

THE CULTIVATION OF HARDY ANNUALS.

ANNUALS, in a comprehensive sense, cannot be dealt with in

During the past season I noted that annuals thrived remarkably well and were quite in contrast to what many of them were in the previous two or three dripping seasons. There are exceptions to almost every rule, and as an instance I would quote that lovely climbing annual, *Mina lobata*, which in the past season grew too freely and was not so effective as usual. A few annuals thrive well in quite moist situations, e.g., *Polygonum orientale*, the *Persicaire* of the French growers; this and a few more may be classed as semi-aquatics. Taken as a whole, it may be stated that hardy annuals revel in abundance of sunshine. My first acquaintance with the *Cosmos*, as a case in point, was upon the top of a low wall at Cadenabbia, on the banks of the Lake of Como. After seeing them there I grew some the following season, but I failed to profit as much as I should have done, having been too generous as it pertained to the soil.

In the cultivation of nearly all hardy annuals that are sown where they are to remain, it is a common mistake, first, to sow too thickly, and afterwards to leave the seedling plants too close together. The result of this is an impoverished plant, and its life is consequently quite fugitive in character. As a case in point, we see mistakes made in many gardens where the popular *Matthiola bicornis*, the Night-scented Stock, is grown. Again, in the case of the now universally popular Sweet Pea, this is oftentimes sown much too thickly, and here, again, comes in another mistake, viz., the leaving of the seed-pods to develop, which soon exhausts the plants. We should aim at securing as long a life as possible for all annuals, and if this important item of cultivation was borne in mind more often than it is, we should see a much finer display.

Hardy annuals should enter into the floral arrangements of our gardens more than they oftentimes do. This might be advantageously done where the amount of glass at command is all too limited. I well remember having seen the wisdom exercised in using these plants in a large public garden in the North of England on one occasion. I thought at the time that this was a good example of how to make the best of things at one's command.

There is a disposition that prevails in some gardens of occupying too much space with bedding plants during the winter months, when the room would be much better utilised with decorative flowering plants in pots and labour saved.

As a class of plants it cannot be said that hardy annuals are of difficult cultivation, if a due proportion of common-sense be exercised in their treatment. Most growers, I have no doubt, will have noted how well an adventitious seedling will thrive where it has had plenty of room to develop. How well these look, too! A casual plant of the *Nicotiana affinis* hybrids will at times thrust itself upon our notice and thrive well. We have now several annuals that serve a useful purpose as foliage plants. *Kochia tricophylla* is an instance of this. As regards this plant, it may be noted that a mistake is often made of sowing the seed and coddling the plants in pots afterwards until they are planted out. The Giant Hemp makes a fine display as a foliage plant for

the backs of borders. From the standpoint of fragrance alone, hardy annuals occupy a prominent position, as in the case of the *Mignonette*, the *Stock*, the *Sweet Alyssum*, the *Candytuft*, the annual *Datura*, the *Sweet Scabious* and, of course, the *Sweet Pea*.

From among hardy annuals (or those that can be raised in cold frames) we draw a large number of our everlasting flowers, such as the *Rhodanthe*, the *Helichrysum*, the *Acroclinium* and the annual forms of the *Statice*. Some of the prettiest of the ornamental Grasses are also annuals; these are excellent to use with the everlasting flowers just noted. *Briza minima*, *B. maxima*, *Lagurus ovatus*, *Eragrostis elegans*, *Agrostis nebulosa* and *A. pulchella* are all beautiful, and they also last well. Where a position can be allotted to hardy annuals alone, they make a most attractive feature, and well repay any extra trouble that may be given them. There is such a diversity in form, in habit and in growth. We have climbing annuals, bush-like annuals, prostrate annuals,

THE VALUE OF SNOWDROPS IN EARLY SPRING.

WITH the earliest days of the New Year we think of the Snowdrop, even though it has not yet reared its head far above Mother Earth. It is "the early herald of the infant year," and is the bearer of the glad message that the springtime is at hand, and that in due course we shall be in the midst of the delights of the flowers of that season.

Yet it must always be welcomed for its own intrinsic grace and beauty. Its virgin purity dawns upon us unsullied by any spot or stain, save the green markings, which but bedeck and reveal all the more the chasteness of its glistening white bells. It is welcomed everywhere. Scattered in myriads in some copse or in spreading sheets in some noble domain, it is the delight of many. On the little lawn of the suburban garden, on the rockery, or in the border of the amateur in a small way, it is dearly cherished. In pots it adorns the window of numbers of lordly dwellings



AN EFFECTIVE GROUPING OF SNOWDROPS IN A WOODLAND BORDER.

annuals for growing upon walls, and annuals that will thrive where scarcely any other plant will grow.

We have hardy annuals also that well repay for pot culture, and I have often been surprised that so little use is made of them in that special way. Nothing in the spring is more delightful than pots of *Nemophila insignis* with the growth completely hiding the pots and studded with its bright blue and white flowers. The *Mignonette* is grown more than the preceding, but its growth in private gardens is not so good as the trade growers produce for our markets. Its requirements are not, I think, so well understood as they should be. The *Viscaria* affords another instance of what may be accomplished in pots with hardy annuals, such as *V. cardinalis*, *V. elegans picta*, *V. oculata* and *V. oculata carulea*, yet these are rarely seen so grown. The distinct advantage of annuals in pots is that they may be cast upon the rubbish-heap when past their best. JAMES HUDSON, V.M.H.

Gunnersbury House Gardens, Acton.

or cut and in glasses is a source of pleasure to many. What delight has not been given to many a weary sufferer by the gift of a bunch of Snowdrops, culled, it may be, in the green pleasaunce and sent by kindly thought to the pain-worn in some great city hospital! And, most sacred of all its benefactions, the Snowdrop springs happily in many a God's Acre, decking the graves of our loved ones and bringing with its annual uprising the hope of the immortal.

It is difficult, as we think of the Snowdrop in its higher aspects, to make a descent to the ordinary and more utilitarian points which fall naturally within the scope of an article of horticultural interest, but in this respect also the Snowdrop forms one of our most interesting studies. It is needless, possibly, to devote any time to a consideration of where the flower can best be employed. That is not a fitting subject of consideration with a flower so universally cultivated, and we shall more profitably, perhaps, devote

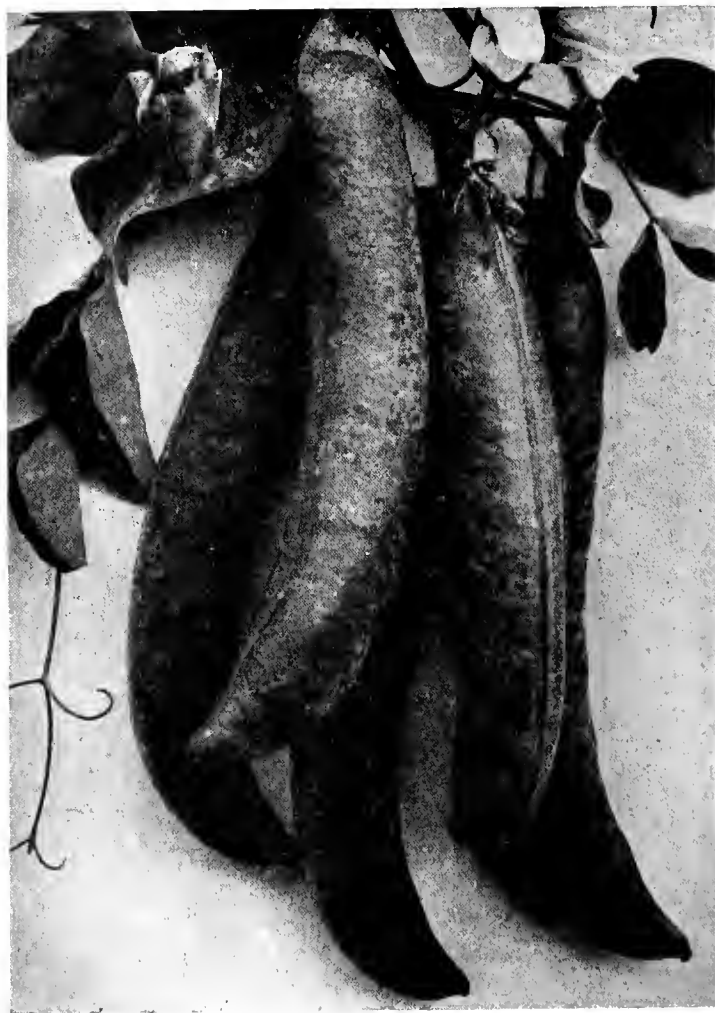
these notes to a consideration of the Snowdrop in its several forms and of their respective values to the garden.

The Common Snowdrop.—Probably no other Snowdrop is so well suited to our general needs as *Galanthus nivalis*, the common one, which has for countless years adorned the gardens and domains of the three kingdoms. It may be reckoned as one of our own flowers, a plant which through long ages has been to us as much a native as any. It is, without doubt, the most useful and enduring of our Snowdrops, and remains and thrives in many places where others of the race succumb. It is so well known that comment upon it is uncalled for. Whether we employ the single or the less graceful but very pleasing double form, we cannot exclude the common Snowdrop from our gardens and pleasures. In masses, such as those shown in the illustration on page 9, the common *G. nivalis* is exceedingly beautiful.

Some Choicer Varieties.—*G. nivalis* has given rise to many forms besides the double one already mentioned, and some of these are available to purchasers, although a good number are only in the hands of a few enthusiasts. One of the finest of all the forms of *G. nivalis* is the South European form, *G. n. Imperati*. This is a truly noble Snowdrop, though not so reliable on some soils as our smaller ordinary form. The best variety of *G. Imperati*, as it may be called for the sake of brevity, is *Atkinsii*, a magnificent Snowdrop. Another, which we may call pseudo-*Atkinsii*, is also very fine. Many other varieties have been collected or raised from the different forms of *G. nivalis*. Among these are the so-called yellow Snowdrops, which have the markings yellow instead of green. *Lutescens* and *flavescens* are the names the single yellow ones bear, and there is also a double one with yellow markings. The green one, *G. n. virescens*, is a singular flower, marked and shaded with green on the exterior. *Scharlokii* is a quaint little one with divided spathes, curling, horn-like, over the flower, and marked outside with green. The late Mr. James Allen and others raised many lovely Snowdrops from *G. nivalis* and others, but these cannot be discussed at the present time. Of the other Snowdrop species, the best known is probably *G. Elwesii*, the Giant Snowdrop of Asia Minor. It is so widely cultivated that it requires no description. It is a variable species, and some of the forms are very inferior. The varieties *Cassaba*, *unguiculatus* and *Whittallii* are the best. In many gardens, however, *G. Elwesii* is not very permanent. *G. plicatus*, the Crimean Snowdrop, is an old occupant of British gardens, and it is easily recognised by the leaves being plicate or folded back at the margins. It is a handsome *Galanthus*, and its best varieties are the *Straffan* one and *G. p. Fraseri*. Hybrids between this

and *G. nivalis* have been raised, some being very fine. *G. Hkariæ*, the Nikarian Snowdrop, is handsome with its broad green leaves and fine flowers. It is recommended in preference to *G. latifolius*, another green-leaved species. Other Snowdrops to be met with, all of considerable beauty, are *G. caucasicus* and *G. byzantinus*, but the best for all general purposes are *nivalis*, *Elwesii*, *plicatus*, and their varieties.

Autumn-flowering Snowdrops.—Mention must now be made of the autumnal-flowering Snowdrops, all considered really varieties of *nivalis*. Some of these are delicate, and with me they have all shown a tendency to come into line



PEA SENATOR, ONE OF THE BEST MID-SEASON VARIETIES.

with the ordinary one in point of time of flowering, though this is not the experience of all. *G. cilicicus*, though later than some, is the most reliable; but *G. octobrensis*, *G. corcyrensis* and *G. Elsæ* are all prized by their owners. As the Snowdrop will grow almost anywhere, although there are a few places where it does not live long, cultural details are unnecessary. It may be said, however, that deep planting gives the finest flowers. Snowdrops are very charming for table decoration when arranged in low vases with green Ivy or Moss as a foil. If wet sand is used instead of water each stem will stand erect in the desired position.

S. ARNOTT.

THE KITCHEN GARDEN.

SOME OF THE BEST VEGETABLES DURING 1911.

THE summer and autumn of 1911 will long be remembered by all cultivators of kitchen garden produce. The great heat and extreme drought during the greater part of the summer and early autumn were anything but favourable to the growth of the large majority of vegetables. Indeed, in many localities it was almost impossible to procure some kinds fit for table use. Not only in such seasons is the scarcity felt at the time, but it also has a deleterious effect on the winter and spring supplies. In spite of this, some very meritorious specimens were exhibited at our leading shows, especially so in Scotland and the North, where a heavier rainfall was recorded, and the cooler conditions proved beneficial to many things. Some very fine examples were also noticeable, though not nearly in such large quantities, at the great show of the National Vegetable Society, at Shrewsbury, and the Royal Horticultural Society's exhibition.

Peas.—These were exceedingly fine in the early season, but the midseason varieties were of very short duration, and the late ones proved almost a failure in many districts. Even that robust and invaluable sort *Autocrat* failed to grow and yield a crop, the first time in my recollection this has proved unsatisfactory. There have been several new introductions, but possibly owing to adverse circumstances these have not done themselves justice, and the best standard varieties still prove the most reliable. *Gradus*, *Early Morn*, *Early Giant* and *Edwin Beckett* are still quite among the best as earlies, all being of first-rate quality. *Duke of Albany*, *Alderman* and *Quite Content* are still unsurpassed as midseason varieties, either for home use or for exhibition. *Autocrat* and *Masterpiece*, in my opinion, are unrivalled for the latest supplies.

Broad Beans.—Except quite the earliest crops, these in a great many cases proved a dismal failure. *Leviathan*, when a true stock is

obtained, is yet one of the very best for any purpose. *Green Windsor* is a splendid variety of exceptional quality for late use.

Runner Beans.—Except for quite late supplies, it is doubtful if any of the present generation remembered a more disastrous year, especially when grown in the ordinary way and without any special care bestowed upon them. These sold at fabulous prices, and even then were almost unobtainable in good condition. The supply of seed of these for the coming season will unquestionably be very short. *Scarlet Emperor*, *White Emperor*, *Best of All* and *Prizewinner* are all very fine, and, as far as I know, the best.

Beetroot.—Where the seed was sown fairly early, quite satisfactory crops resulted. The Turnip-rooted variety did remarkably well, and many of the large black varieties were excellent.

Borecoles or Kales.—I have seldom seen these make such poor growth, especially during the autumn; but, thanks to the open weather experienced up to the time of writing, these have made up somewhat, and will in all probability produce a good yield in early spring. Cottagers', Scotch and Labrador are among the best.

Broccoli.—The same applies to these. Only on rich, good, retentive soil have these made satisfactory growth, and the supply of these for winter use will, I fear, be much below the average. The very latest varieties are more promising. Late Queen, Model and Latest of All are our best.

Brussels Sprouts.—These, on good ground, are with us an exception to the Brassica tribe, having done splendidly and given us an abundance of good, firm buttons. We depend principally on Dwarf Gem, an extremely fine variety, which should find a place in every kitchen garden.

Cabbage.—This crop did very well in the early season, but was far from satisfactory during the continued drought. Rosette Coleworts and Hardy Green are quite good at the present time.

Carrots.—Only in a few cases has this crop proved satisfactory. The Carrot fly and wire-worm were very troublesome. New Intermediate, Model and Favourite are a good selection for all purposes.

Cauliflowers.—I never remember such a dearth of good curds during August and early September as was the case during the past year. In quite the majority of cases the plants turned in prematurely and were practically worthless. The earlier crops were good, and so were the later ones. We relied chiefly on Early Forcing, Magnum Bonum and Walcheren, and last year we also had a fine new variety named Duancourt. For midseason Early Giant and Autumn Giant are good; and Mammoth is fine for late supplies.

Celery.—This vegetable, being moisture-loving, naturally resented the unusual weather, the result being poor heads, both in size and quality. The new disease, which has attacked it badly in many districts, is causing much anxiety. I have known cases where the entire crop has been totally destroyed. It attacks the foliage and spreads rapidly, the whole becoming affected and, to all intents, worthless in a few days. Giant White, Aldenham Pink and Standard Bearer (red) are quite the best with which I am acquainted. Celeric, or Turnip-rooted Celery, where planted on rich ground, has made good growth, and the roots will prove extremely useful.

Cucumbers.—Being sun-loving plants, these, naturally, did wonderfully well, and were in large demand; consequently, growers should have reaped a good harvest from these. We grow chiefly Ideal, which has all the qualities of a first-rate Cucumber, being handsome in appearance, most prolific and of excellent quality, unsurpassed for exhibition work.

Leeks.—These in most cases, especially in the South, were anything but first-rate, a very large percentage of the plants going off in the early stages of their growth, owing entirely to the extreme heat. International with us proved to be far the best.

Lettuces.—Except in the early and late seasons, these were practically a failure, the plants being

completely burnt up, and good Lettuces could hardly be purchased at any price. This applies equally to Cos and Cabbage varieties.

Maize or Indian Corn.—I have never seen this vegetable, which is annually increasing in popularity, so fine as during last year. The cobs were quite equal to anything I have ever seen imported. Country Gentleman is an excellent variety for garden culture. E. BECKETT.

(To be continued.)

PEA SENATOR.

ALTHOUGH this variety has been in cultivation for some years, it is still grown very extensively, both for private use and for market. It is one of the most reliable second-early or midseason Peas that we have, the large, well-filled pods usually being produced in pairs. The haulm, which is usually of a robust character, attains a height of



THE PINK-FLOWERED VARIETY OF ERICA GRACILIS.

2½ feet to 3 feet. During the drought of last year Senator gave better results than several other and newer varieties that I grew. H.

THE GREENHOUSE.

ERICA GRACILIS.

TWO of the best winter-flowering Heaths for greenhouse culture are *Erica gracilis* and *E. nivalis*. The former is a rather variable species, and *E. nivalis*, which is grown in large quantities by market-gardeners, is usually regarded as a white variety of *E. gracilis*. Further evidence of variation in *E. gracilis* is observed in the pink sport illustrated on this page. This is a free-flowering variety which appears to be amenable to good cultivation.

That *Ericas* are rather fastidious in their requirements is a fact that is only too well known in certain districts, and it is the one reason why these plants, which produce lasting effects in the dull days of winter, are not more widely grown. In some localities greenhouse Heaths seem to be affected with a kind of "won't grow" affliction. This is often due to the presence of lime in the water. Under such circumstances and where none but hard water is available, it is an excellent practice to place a hag of soot in a tub of water and to use weak soot-water for watering. It is a common mistake in *Erica* culture to allow the plants to grow unchecked or only to be slightly pruned year after year. With the exception of some of the very hard-wooded kinds and those that are slow-growing, *Ericas* are greatly benefited by somewhat severe pruning after the flowering season is completed. Such a species as *E. hyemalis*, for example, may be

pruned to within 1 inch or 2 inches of the bases of the shoots, and *E. gracilis* may be pruned almost as hard with advantage.

Ericas should never be allowed to become pot-bound, and repotting is best done in the spring about the time when fresh growth commences. The compost should consist of good fibrous peat, together with about one-third its quantity of silver sand. Greenhouse *Ericas* are impatient of fire-heat, and the more light and air they receive within reason the better. In the summer months they should be placed in a cold frame and have their pots plunged in ashes.

BUDDLEIA ASIATICA.

It is rather curious that the virtues of this plant should not have been discovered until the last few years, for plants were flowered in England nearly forty years ago. Until Mr. E. H. Wilson

sent seeds home from China to Messrs. Veitch some ten or twelve years ago it was, however, rarely seen outside botanic gardens, whereas it is now fast becoming a necessary adjunct to the conservatory or greenhouse during winter and spring. Grown either from seeds or cuttings, it may be allowed to develop with one or more stems. As the most floriferous plants are those which have formed long, strong branches, it is necessary to provide the plants with good loamy soil and feed them liberally during their growing period. Usually, good examples may be obtained in pots from 6 inches to 8 inches in diameter, though for large specimens somewhat larger pots may be necessary. Cuttings may be rooted in March, and during the early stages of growth a warm greenhouse is needful. About the end of June the plants may be plunged in ashes out of doors, where they will be quite safe until the end of September. By that time they may be anything from 5 feet to 9 feet high, with numerous side branches clothed with lanceolate leaves 6 inches or more long, dark green above and silvery beneath. The small, fragrant white flowers are borne in great profusion in long racemes from the terminations of the main and side branches, and the flowering period extends

so obtained will, if they are kept growing, flower in a satisfactory manner the same year.

This modern method of quick returns was well exemplified at the meeting of the Royal Horticultural Society on July 18 last, when Messrs. Veitch exhibited a splendid collection of Gloxinias, showing a wide range in the colour and marking of the flowers. These were all the produce of seed sown early in February, so that the plants were really at the time they were exhibited less than six months old. Not only is the short time in which these plants attain flowering size worthy of note, but a characteristic present-day feature is that, owing to the great care exercised in the sowing of the seed by our principal seed-dealers, the different forms may, as a rule, be depended upon to come true when raised in this way.

A good illustration of this was brought under my notice early last autumn, when I was shown some beds of Begonias raised from seeds supplied by one of the firms that advertise in *THE GARDEN*. The plants were nearly as even as if they had been propagated from cuttings, the flowers all of one uniform high standard and scarcely a rogue among them. The colours were yellow, scarlet, crimson, and white.

surfacing of the same compost, sifted very fine. This will still allow a space between the surface of the soil and the rim of the pot or pan, a very necessary precaution, owing to the fact that the receptacle is to be covered with a pane of glass when the seed is sown. It is very essential that the soil before using be baked or heated in some way, in order to destroy all animal and vegetable pests which might prove fatal to the tiny seedlings. Before sowing the seed the soil should be thoroughly watered, but if this is done with a rose, however fine, it is apt to make the surface too solid. A good plan is to stand the pot or pan in some slightly tepid rain-water at such a depth that the top of the water is just below the surface of the soil. The water will thus enter by the bottom hole or holes and percolate gradually through the entire mass. This system is the best to adopt in the case of all minute seeds and Fern spores.

Sowing the Seed.—This should be sprinkled as thinly as possible on the still moistened surface, placing the pots in a structure where a minimum temperature of 65° can be maintained, rising, of course, during the day. A little bottom-heat will, if it can be provided, be an advantage. A piece of glass should be placed over each pot or pan, and the whole kept well shaded till germination takes place, which will be in a few days.

Treatment of the Seedlings.—

When the first true leaf is developed, the young plants should be pricked off, the pots being prepared as for sowing, except that the soil is made rather less firm. A slender piece of wood with the apex cut in the form of a V is very useful for lifting the young plants. With a pointed dibbler in the right hand and this in the left, the delicate operation of pricking off may be successfully carried out. Directly the seeds germinate, the glass and permanent shading must be removed, but at no time must the sun be allowed to shine on the tiny plants. Under favourable conditions the young plants will quickly make satisfactory progress, and in a genial growing temperature they will soon be sufficiently advanced to pot them off singly into 2½-inch pots. For this purpose much the same soil



BED OF TUBEROUS BEGONIAS AT MALVERN LODGE, WORCESTER PARK.

over two or three months. By rooting a number of cuttings at a later date it is possible to have nice plants 2½ feet to 3½ feet high in 5-inch or 6-inch pots, which are valuable alike for greenhouse or room decoration. It is probable that it might be grown successfully out of doors in the South-West Counties, though it is not generally suitable for border culture. Young plants are, as a rule, preferable to those three or four years old. W.

RAISING GLOXINIAS AND TUBEROUS BEGONIAS FROM SEED.

It is not so very many years since Gloxinias were, generally speaking, principally increased by leaf-cuttings, and tuberous Begonias to a considerable extent by cuttings of the young shoots in the spring. Even in the case of seedlings of these last-named, they were usually considered of small account until the second year. Now all this is changed, for if the seed is sown early in the year, say, in the first half of February, the young plants

Soil for Seedlings.—Though the requirements of the Gloxinia and the tuberous Begonia when mature are different, yet for the sowing of the seed and the treatment during their earlier stages they may well be bracketed together. The seeds of both of them are exceedingly minute, so that especial care must be taken in the sowing and subsequent treatment. Whether shallow seed-pans or ordinary flower-pots are used for the seeds, they must be quite clean and effectually drained to within a couple of inches or so from the top. In order to encourage the tender rootlets and induce the young plants to grow freely, a liberal amount of good leaf-mould should be mixed with the compost, a suitable proportion being one half made up of loam and silver sand, and the other half of leaf-mould. With a little rough material placed immediately over the crocks, this compost, having been rubbed through a sieve with a quarter-inch mesh, should be put in the pans or pots, pressed down moderately firm and made quite level. A space of about half an inch should be left below the rim to allow of a quarter of an inch

mixture as that recommended for sowing the seed may be used, but, of course, it need not be sifted as finely. The young plants, both of Begonias and Gloxinias, will thus be kept growing freely, that is, if given the ordinary treatment of the occupants of the warm greenhouse or intermediate structure. Directly the pots are well furnished with roots, the plants should, according to their vigour, be shifted into pots from 4 inches to 5 inches in diameter. For this potting rougher material may be used. A mixture of three parts good fibrous loam to two parts of leaf-mould and one of sand will form a very suitable compost for both classes of plants. As they become established after their last shift, the Begonias must be hardened off, especially if it is intended to bed them out; but in any case the temperature of an ordinary greenhouse will be sufficient for them. The Gloxinias, on the other hand, are benefited by somewhat warmer conditions, though, once thoroughly established, they will in the summer succeed perfectly without any artificial heat. H. P.

GARDENING FOR BEGINNERS.

GOOSEBERRIES AND CURRANTS FOR LARGE AND SMALL GARDENS.

MANY gardeners and amateurs have only a limited space where they can grow fruit, and in consequence are restricted to a very few bushes of the useful Gooseberry. But if cordon trees are bought or raised, many positions could be found for them, such as on a north wall, fence,



A SINGLE CORDON TREE OF WHITE CURRANT.

near the edge of walks, or trained to wire supports across the garden, and other suitable situations will also occur to the observant cultivator. The best time to plant is from November to March, but if it can be done before Christmas it somewhat relieves the pressure of work when the days begin to lengthen. The condition of the soil must be taken into consideration, and the operation never performed when it is wet and sticky, for it is much better to lay the trees in a shallow trench till a favourable opportunity occurs. Deep planting ought not to be practised, and no manure applied, if the soil has been previously well treated, till the young trees begin to bear good crops, when a mulching of fresh stable manure in March will greatly benefit them. Where the soil is of a sandy or gravelly nature, more liberal dressings are necessary, and it is a good plan to dig a portion in between the rows, as this will improve the fruit both in size and quantity. When preparing the ground, it should be deeply dug and all weeds removed, especially the wild *Convolvulus* or Bindweed, which becomes a most troublesome pest in a very short period if allowed to remain.

Methods of Training.—These are various, the most common being the bush-trained tree, which should have a stem at least 1 foot high with the branches spread in all directions and so arranged that air and light can pass through, while sufficient space must be left for the hand to gather the fruit. Standards are sometimes grown which form compact heads, and generally bear large crops. They vary

in height from 3 feet to 5 feet, the variety of Gooseberry being grafted on stems of *Ribes aureum*. Then there are palmate-trained pyramids and cordons, such as upright single, double and triple. It is to the cordons, however, that I would draw special attention. They are ideal for a small garden, and where it is desirable to prolong the supply of ripe fruit, this can be accomplished by planting a few specimens on the north side of a wall or fence. When grown in this way they produce an abundance of berries, and I have seen upwards of one hundred and fifty splendid fruits on a three year old triple cordon. By this method a greater number of varieties can be included and large quantities of fruit secured from a small space, while they are easily netted where birds are troublesome. The training of a cordon begins early in its career. The plants for this purpose are selected from the rooted cuttings, and must have shoots that are nearly vertical and in a line with each other. Each shoot (one, two, or three, as the case may be) is tied to a stake, and the remaining growths are cut back to form fruiting spurs. Each year the leading stems are allowed to grow about 1 foot till the desired height is attained, and all side shoots are cut back to three buds in winter; but in July it is also advisable to pinch out the point of each side growth and pull away any that are formed around the base. This will help the fruit considerably. Bushes are not pruned so hard, the object being to maintain an open and well-balanced head. Upright-growing varieties should be pruned to a bud pointing outwards, while for those possessing a weeping habit an inside bud should be chosen when cutting back the lower branches. This operation is usually left till the spring where birds are likely to take the buds: but if a dressing of soot, lime and milk is sprayed over the trees in November, they will be protected to a great extent. A dry day should be selected for this purpose.

Some Good Varieties.—The number of varieties in commerce is almost legion, but there is not much to choose between some of them, and one can procure a representative collection by confining it to a dozen or even less. For picking green, Keepsake, Leveller and May Duke are recommended, the latter being exceptionally early, with berries clear and bright in appearance. All three are good croppers. Among the best dessert Gooseberries are Langley Beauty, which has yellow fruits, large and of very rich flavour; Early Green Hairy, very rich and sweet, but rather small; and Langley Gage, white, described as extra sweet and delicious. These are early varieties. For midseason we have Whitesmith, a splendid-flavoured sort; and for a later supply Golden Gem, which bears attractive yellow berries; Keen's Seedling, Iron-

monger and Warrington, which are all reliable varieties and in the front rank for flavour, cropping and vigorous growth.

Red and White Currants.—What has been said of training the Gooseberry applies with equal force to either Red or White Currants, both of which produce very large clusters of fine fruit if they are pruned closely each year. The young shoots should annually be shortened to 1 inch or 2 inches of the main stem. These Currants make handsome pyramids and bear profusely when the young wood is shortened to form spurs as described. That the White Currant is amenable to a restricted system of training—and the same applies to the Red Currant—is clearly shown by the illustration on this page, which depicts a single cordon in full bearing. On the other hand, the Black Currant is not adapted to this mode of culture, for, unlike the Red, it fruits chiefly on the young wood made the previous season.

Red Currants do remarkably well when trained to wires as single, double or treble cordons. This method of culture yields excellent fruit without taking up too much room or smothering up the neighbouring plants, and this is a matter of the greatest importance in many gardens. A few good varieties of Red Currants are Red Dutch, of sweet, rich flavour, bunches short; La Versailles, large and good, abundant bearer; La Hâtive, early; and Raby Castle, late. There are not many white varieties, and of them White Dutch, a well-known sort, is as reliable as any.

B. T.



A WELL-TRAINED GRIDIRON CORDON GOOSEBERRY BUSH.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The New Year.—Before commencing my calendar notes for the ensuing year, during which I hope to treat upon the various branches of indoor and outdoor gardening with the best methods known to myself, I would like to deal with a few preparatory notes. Though the present may appear to some a very dull season, there is a great deal of work that can be done that will do much to relieve the pressure that must inevitably arrive in the spring.

A Clean Garden.—It has always been my aim to have a clean garden to commence with in the New Year, and to properly clean up and dispose of all rubbish to the best possible advantage.

A Use for Old Leaves.—Leaves are, of course, the greatest bore, and means should be adopted to store them where they cannot prove a further hindrance, but can be put to the best possible use. Here we have an enclosure made of stout boards, and each year one-half, that is, the oldest, is wheeled out and makes a useful bulk of material for adding to vacant ground, especially where the land is of a heavy character. The resulting gap is then filled up as quickly as possible, and a covering of the old material placed on the newly-carted leaves to prevent them escaping, and on such a heap we place our cold frames and so obtain a steady bottom-heat for providing early vegetables. For potting purposes a further heap should always be made of Oak or Beech leaves for preference, and free from sticks and other rubbish.

Preparing Soil for Seed-sowing.—This is an important item, and much is needed in a well-ordered garden for pricking out the various plants into boxes and for seed-sowing. Old potting soil should always be retained for this purpose and stored in a dry, open shed, and during wet weather be passed through a fine-meshed sieve. Manures, sand and other sundries ought to be stored in the best possible manner.

Protecting Plants from Frost.—Protecting material for the various occupants of frames should be kept in readiness and in a dry state, as oftentimes the severest frosts of the season are experienced in the New Year. For this purpose good Archangel mats are invaluable, with an extra covering of straw or Bracken if needed. Much assistance can also be given to glass-houses or frames containing hot-water pipes by covering the roof glass with mats or blinds; this is much to be preferred to excessive heating.

Tender Shrubs, both on walls and in the open, will need some slight protection in the event of severe weather, and reed mats are excellent for the purpose. Very small specimens are well protected by being enclosed with wire guards and a little dry Bracken shaken in among them. Some of the choicer alpine plants that are difficult to grow and resent too much wet weather are easily protected with a sheet of glass firmly fixed over the plant to ward off heavy rains.

Ventilating Frames.—Whenever the weather permits, give air to the occupants of frames, and for all hardy subjects in mild weather remove the lights entirely and always admit air on the leeward side. Any plants requiring water should be attended to as early in the day as possible and when the weather is brightest.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Seakale.—We have been using heads forced in a stove Palm-house, but for some time hence Seakale comes on sufficiently well in a Mushroom-house. Only enough at a time should be placed there to force to keep up the needed supply. Cut off all the roots before forcing. Of these I shall have something to say shortly. Meanwhile, if the weather permits, the whole crop of Seakale should be lifted and stored for future use.

Endive.—This, of course, is not forced, the plants being lifted and placed in a dark cellar or Mushroom-house in the coldest part, where in a short time the leaves are blanched. Litted with a ball of soil about the roots, they need only be placed on the hard floor, requiring no further attention. Enough to last five or six days should be lifted from the frames at short intervals.

Vegetable Seeds to Sow.—For exhibition a few seeds of Onions, such as Ailsa Craig, and of Leek Pitt's Lyon should be sown at once. The latter takes some time to germinate even in a warm house. Sow also in cutting-boxes Brussels Sprouts, Cos and Cabbage Lettuces, these to be transplanted into frames; forcing Cauliflowers, to be potted later; and, if Parsley is likely to be scarce, some of this, to be picked from the boxes.

Raspberries.—These should be done up for the season, the canes cut to the proper height and tied to wires or stakes, seeing first of all that any stakes that have rotted are renewed. A dressing of rotted cow-manure has a very beneficial effect on this fruit, and should be applied at this time.

Gooseberries.—If closely pruned, defer pruning for some time; but if the old shoots only are removed, the bushes may be pruned at once. The latter method secures the largest crops; but unless the fruit is thinned when green, the berries do not attain the size of those pruned closer. Those on walls may also be pruned either way, and the main stems retied to the nails.

Red Currants.—The side shoots of this fruit must be cut in very close, else ugly snags are formed in course of time, which are a hindrance when the fruit is being gathered. Keep the centres of the bushes open, and always retain a few longish shoots of the previous year.

Black Currants.—These should have been pruned long ago, but if they have been overlooked, remember that all that is necessary is a thinning out of the older growths, and no more of the last year's should be left than enough to furnish each bush without being crowded in summer. In Cornwall there is a system in operation which consists in cutting down to the ground half of the stock annually, thus always having young wood for cropping. As one means of preventing the spread of big-bud, it might be advantageous to try this.

Other Small Fruits.—Of these the most desirable is the Parsley-leaved Bramble, a prodigious cropper and late. All it needs is the removal of last year's cropping shoots, a slight shortening of the young ones, and proper means of support given. The Loganberry is very much more vigorous, and, besides the worn-out growths, the more weakly of the young ones should be removed. The Wineberry asks for the old shoots alone to be removed.

R. P. BROTHERTON

Lyntonham, Prestonkirk, N.B.

THE TOWN GARDEN.

The New Year.—Time passes very quickly; it does not seem a whole year since the commencement of 1911, but to look forward to January of next year the time seems long. Much good work may be done in a year. New gardens will be formed, old ones renovated, and very few indeed will escape alteration of some kind. The alterations will be carried out with a view to improvement and to create new interest in the immediate surroundings of the dwelling-house. How vastly does a nice garden improve the general appearance of a dwelling-house; and no one can engage in the work of gardening without reaping much benefit, both bodily and mentally.

New Gardens.—When new gardens are formed, the lines on which they are laid out must be governed by their position and surroundings. It is a wise plan to try to have something quite different to the general rule, to avoid formality, to create the appearance of extent, and not to overcrowd and thus cramp the space at disposal. Everything attempted should be well done; only those trees, shrubs and plants that will thrive in town districts must be planted, as unsuitable ones are sure to cause a lot of disappointment and more expense and labour than others which are hardier and of freer growth. I am a town gardener, with experience of gardening in some of the manufacturing districts as well as in towns and their suburbs where the atmosphere is not much thickened by smoke and fogs, and I will give some hints which may prove helpful, especially to beginners—a very enthusiastic body of horticulturists.

The Lawn.—A lawn in a town garden is thought much of, and one cannot wonder at it being so highly appreciated because green fields are far away. It serves many purposes, one of the chief being its fitness as a setting for flower-beds, and also its refreshing influence during the hot days of summer. In winter-time the owner is content to practically hide his lawn under a thick layer of rotted manure. He is unselfish; he loves his lawn and wishes to have it extra green in spring and summer time; therefore he does not mind the untidy appearance the manure presents during the winter. This very heavy dressing of manure is not a good thing for the lawn, as the grass is often killed wholesale and bare places appear in spring. The best way to enrich the lawn now is to use rotted manure, broken up thoroughly, one-half, and gritty soil one-half. The two ingredients, well mixed, must only be put on thinly, and be brushed to and fro gently several times until the end of February, when another light dressing, also some bone-meal, may be given; but details of the work will appear in due course.

The Paths.—Where new paths are formed it is essential that plenty of rough material, such as broken bricks, stones and clinkers, be placed in the bottom and the coarser gravel on the top, with a final layer of small gravel, but the fine gravel should never be put on thickly, else it will get loose in dry weather and much indented in wet. Old paths may be made to resemble new if they are carefully turned. In doing the work the roughest portion should be raked down into the bottom, leaving the finer at the top, but not containing unduly large pebbles; then the surface will again be a nice smooth one, especially if care is taken to have it rounded slightly.

The Herbaceous Border.—The town gardener must take every care of his herbaceous plants, as they are not only popular in these days on account of their great beauty, but because many kinds thrive so well in adverse circumstances and really give every satisfaction, flowering freely during many months of the year. A list of suitable varieties will be given. Very often these plants are grown in shrubberies—in the front part—and then they fail to give satisfaction, as when a spell of dry weather comes they shrivel and lose their leaves. One cannot be surprised, because the shrubs have robbed them of moisture and nourishment. An open quarter is best for them, and the soil must be deeply dug or trenched and enriched with manure. TOWN GARDENER.

SEEDS TO ORDER FOR SCOTTISH GARDENS.

ONE of the very earliest things to be done in the New Year is to make a list of the various seeds needed to meet requirements; then order them, not necessarily from one firm, because there are some vegetables and flowers the strains of which are better from one than from all others. But which is the best is a matter that each must discover for himself. For ordinary purposes it is bad economy to grow a large number of varieties of any vegetable or any plant; indeed, you will be better served with about four sorts of Peas and Potatoes than multiples of that number, and all through, with flowers as well as vegetables, the few are to be preferred to the many.

The names I am about to quote represent reliable varieties of the different kinds, and are not expensive. Early Peas: Dwarf—either Chelsea Gem, English Wonder or William Hurst; early, tall—William I. or Pilot. Potatoes: Puritan, Sutton's Early Regent or Golden Wonder. Broad Beans: Green Windsor; for exhibition—Exhibition Longpod. French Beans: Osborne's Forcing, Canadian Wonder; climbing variety—Princess of Wales. Beet: White's Black. Broccoli: Autumn Protecting, Snow's Winter, Perfection, Satisfaction, Late Queen, Methven's June or Purple Sprouting. Borecole: Dobbie's Victoria. Brussels Sprout: Dalkeith. Cabbage: Vanack, Edinburgh Market, Dwarf Drumhead or London Colewort. Savoy: Green Curled. Cauliflower: First Crop or Methven's Forcing, Magnum Bonum, King or Autumn Giant. Carrot: Early Nantes or Scarlet Intermediate. Celery: White—Sandringham; red—Standard Bearer. Cucumber: Telegraph. Endive: Curled and Batavian. Leek: Lyon Improved. Lettuce: Tom Thumb and Drumhead or Neapolitan; Cabbage—Hicks' Hardy Cos. Vegetable Marrow: Long Cream. Onions: Ailsa Craig and James' Keeping. Parsnip: Hollow Crown. Radish: French Breakfast. Spinach: Giant Viroflay. Turnip: Early Snowball or Golden Ball. Tomato: Perfection, Supreme or Eclipse.

Flower Seeds.—Asters: Ostrich Plume—White, Azure, Rose Pink and Salmon; Comet—White, Salmon, Azure and Dark Blue; Quilled—Lemon, Purple King, Pink and French White; Single—Mauve, Dark Blue and Pink; Giant Single—Light Blue. Alonsoa: Mutisi and Warscewiczii, tall. Alyssum minimum. Antirrhinum: Intermediate—Pink, Apricot, Fire King, Carmine Pink and Yellow Queen; tall—Golden Chamois, Carmine Pink, Pink, Apricot, White, Cloth of Gold, Rosy

Morn, Crimson and Gold. Begonia: Crimson Gem. Calendula: Orange King and Lemon Queen. Canterbury Bells: Cup and Saucer—Pink, Mauve, White and Deep Blue. Annual Chrysanthemum: Coronarium—Dwarf Double Yellow and White. Centaurea: Cyanus, the common blue. Celsia: Arcturus and cretica. Clarkia elegans: Double Salmon and Firefly. Cosmos: Early-flowering Pink. Coreopsis tinctoria. Dimorphotheca aurantiaca. Dianthus Heddewigii: Double Salmon. Delphinium: Butterfly or Queen of the Blues (light blue). Gilia coronopifolia. Godetia Schaminii fl.-pl. Humea elegans. Hollyhock: Rose Queen and White (double); single—various. Larkspur: Stock-flowered—Rosy Scarlet; blue—Emperor and Azure Blue. Senecio elegans: Various. Kochia trichophila. Lavatera rosea splendens. Lobelia: William I. Lupinus: Hartwegii, Azure Blue and polyphyllus (white and pink varieties). Linaria reticulata aurea. Love-lies-bleeding: Prince's Feather. Matricaria Golden Ball. African Marigold: Orange and Lemon. French Marigold: Tall Striped and Dwarf Brown. Mignonette: Giant, Giant Red and Giant White. Dwarf Nasturtium: Salmon, Cream and Aurora. Nigella: Miss Jekyll. Canary Creeper. Nemesis: Suttonii, Rich Orange or Mixed. Fancy Pansy. Pentstemon. Phlox Drummondii: Intermediate varieties. Poppy: Nudicaule, Shirley, Cardinal, and Cardinal Salmon Pink. Polygonum orientale. Salpiglossis: Large-flowered. Salvia: Pride of Zurich and Horminum. Saponaria: Calabrica and Alba. Sweet Scabious: Large-flowered—Pink, Mauve and Black. Statice: Sinuata and Suworowii. Ten-week and East Lothian Stocks. Tall Sunflowers. Sweet William: Pink Beauty and Scarlet. Swan River Daisy: Blue and White. Sweet Sultan. Wallflower: Various. Verbena: Mixed. Xeranthemum superbissimum. Zinnias.

For the Greenhouse.—Ostrich Plume and Comet Asters, tall Antirrhinums, herbaceous Calceolaria, Campanula pyramidalis and Canterbury Bells, Clerodendron fallax, Celosia plumosa, Cineraria, Clarkia elegans, Cyclamen, Francoa ramosa, Freesia, Gesnera hybrids, Gloxinia, Grevillea robusta, Chinese Primulas, Primula obconica, Schizanthus wisetonensis and others, Smilax, Streptocarpus and Trachelium caruleum. Then there are bulbous plants of tuberous Begonias, which should be ordered without delay; and indispensable for the flower garden are the Gladioli, e.g., Childsii, Groff's hybrids, primulinus hybrids, brengleiensis, Hollandia, H. Mikado, Baron Hulot and Marie Lemoine. Galtonia candicans, Liliun tigrinum, L. splendens, L. Fortunei, L. excelsum, L. chalcedonicum, L. pardalinum, L. croceum, L. Martagon album and dalmaticum are all handsome and present no difficulties in the way of cultivation. Montbretia: Messidor, Chrysis, Germania, Prometheus and Globe d'Or, doubles. If I may mention Sweet Peas, it would be to recommend for general purposes the following: Mary Campbell, Clara Curtis, Thomas Stevenson, Nubian, Edrom Beauty, Zarina, Paradise Ivory, Nettie Jenkins, Melba, Zephyr, Menie Christie, Etta Dyke, Countess Spencer, Elsie Herbert, Mrs. Hugh Dickson, Constance Oliver, Elfrida Pearson, Sunproof Crimson and Mrs. Townsend.

General Remarks.—Let us hope that all rough outside work, such as the cleaning of shrubberies, the final sweeping of lawns, the turning and clearing up of heaps of rubbish and such-like necessary but unremunerative jobs, has been got out of hand, so that we may begin the New Year with plenty to

do otherwise of a more refined horticultural nature. There ought to be an abundant supply of cloth shreds ready for nailing in fine weather. It is cruel to set men to nail if the temperature is low; moreover, it is a waste of time, because they cannot handle the material properly. R. P. BROTHERSTON
Tyninghame, Prestonkirk, N.B.

THE PLANTING OF HERBACEOUS BORDERS.

TO-DAY we are wont to see hardy plants in many places—beside the lawn, beneath the trees, in shrubbery, woodland and parkland, each playing a part. In short, there is no position within the limits of a garden, be it ever so small or ever so large or spacious, where hardy plants may not be introduced to advantage. Incongruities there may be—must be—as the outgrowth of an over-zealous or over-anxious worker. Such things are perhaps seen most frequently in woodland or grass planting.

In the border proper this is the less likely to appear, though even here there is the same danger of overcrowding things, and that phase of it more particularly which savours of immediate effect or ostentatious display rather than of that gardening "which doth mend Nature," and which, indeed, is Nature. Hence if the hardy plant border is to represent all that is best, the planter must work intelligently from the beginning, must appreciate to the full the ultimate developments of the varying subjects he may employ, so that the grace and charm of leaf and flower be all revealed to the full. Above all, he must see to it that young, or at least youthful, vigorous examples only be selected at the start, since no preparation of the soil or subsequent treatment or care can in any degree compensate therefor. Huge clumps of plants should never be planted intact; they are, indeed, as the useless log by comparison with the useful example. Almost as bad are the hard, solid lumps of things—Michaelmas Daisies, Phloxes, Pyrethrums and the like—favoured for no other reason than that they exist. To the use of such material may be traced not a few of the present-day failures. The youthful example is a plant of promise, and with free scope for its energies is likely to play its part well. A dozen or a score of such pieces will form a group that will impress the beholder and make a feature in any garden. The big spade-divided, solid-looking clump is but the old-age pension aspect of a once vigorous type. Such an one has played its part: how well or ill will have depended entirely upon its early education—cultivation, intelligence, environment—and to-day our garden borders are as dependent upon these things as of yore, more, perhaps, since the great modern wealth of material necessitates a livelier intelligence and a greater discrimination than ever before. E. H. JENKINS.

BOOKS.

Farm and Garden Rule Book.*—The subtitle of this book is "A Manual of Ready Rules and Reference," with recipes, precepts, formulas and tabular information for the use of general farmers, gardeners, fruit-growers, stockmen, dairy-men, poultry-men, foresters, rural teachers and others in the United States and Canada. The book extends to nearly six hundred pages and is

* "Farm and Garden Rule Book," by L. H. Bailey; price 8s. 6d. net. Macmillan and Co., Limited.

divided into twenty-nine chapters, and teems with figures and tables which the author has most carefully compiled. Although the subjects treated of are so numerous, they are, in nearly all instances, fairly exhaustively dealt with. The instructions given apply mainly to the United States and Canada, but a vast amount of them apply with equal force to operations in Great Britain and Ireland. Gardeners, farmers and horticulturists generally who contemplate emigration to either the United States or Canada should possess a copy of the work, as they will find it invaluable to them. Seed tables, planting tables, crops for special farm practices, commercial grades of crop products, forestry and timber, livestock rules and records, exhibiting and judging livestock, and milk and milk products are all subjects ably and interestingly dealt with. Farm engineering, mason-work, tables of American weights and measures and similar matter must prove most useful to a new arrival in the country. The poultry-keeper will find practically all the information he needs in Chapter XX. There is not much space devoted to horticultural matters, but the information given regarding the erection of greenhouses, their heating and management of boilers and pipes, is very serviceable; so also is that connected with window-garden work.

The Profitable Culture of Vegetables.*—

Small holdings are becoming more numerous every year, and those who cultivate them wish to secure as much produce as possible, at a minimum cost of labour and material, from small areas. The author of this book recognises the fact, and has made a very successful effort to place before such cultivators a mass of useful information which they will do well to study. The book runs to 450 pages, and contains valuable hints in a concise form. Although the price—6s. net—is a high one for the million, no earnest cultivator of small holdings, or those who elect to follow the French intensive system of culture, will regret having purchased a copy. In view of the coming importance of small holdings, one cannot but regret that the author has not given a little more information on the subject, though that supplied is of the highest order and will be of inestimable value to the cultivator. In other parts of the book he can find much information which will serve his purpose also. Market-gardeners and others who wish to follow the principles of French gardening will revel in the perusal of the book, as the information given is up to date and exhaustive.

HARDY GREENS FOR SPRING SUPPLY.

ON page 584 of THE GARDEN dated December 2, 1911, the above heading and the paragraph following it drew my attention because of its application to what must always be, or at least ought to be, a first principle in all gardens, that is, a thought for the future.

As one who is in charge of one of the largest Poor Law Institution grounds in the kingdom, where a supply of all the best kinds of vegetables has to be kept up all the year round, I venture to say that if my supply of spring crops had to depend on planting all surplus stocks of plants, it would be a very sorry affair. So I would just like to give your readers an idea of how I am able to realise

* "The Profitable Culture of Vegetables," by Thomas Smith, F.R.H.S.; price 6s. net. Longmans, Green and Co.

a most excellent supply of the very choicest types at a time of the greatest scarcity.

It would be most interesting reading if one could give a daily supply of vegetables which is required in such an institution as I have to supply, but it is on a very large scale, and it needs all the thought and skill that one can put into the work to keep it up. Besides, all the labour is done by able-bodied casuals with spades and forks. It is most interesting, and my long experience of this class of labour will always enable me to speak with some weighty authority upon the value of it in connection with any scheme or schemes for utilising this kind of unskilled labour which any public authority may take up.

In February last I had planted out some thirty thousand Flower of Spring, Early Rainham, Early Offenham and Wheeler's Imperial Cabbage. They got well established in good time, and I began cutting good, solid heads in early May and several times a week afterwards. The supply increased until, as my diary tells me, we cut from July 7, twice a week, seventy to eighty dozen for a week's demand. This planting was supplemented by a few thousand more of June-planted Enfield Market, which have only just been finished. As the heads are cut, each plant is stripped and the ground cleaned. They are then left to sprout again. By this means I have been meeting a twice weekly demand for Cabbage right up to December 3. I have at the present time a plot of ground filled with stalks which have been the latest cut and numbering 4,000, which will be left until late spring, when they will burst out and yield a crop of the sweetest Cabbage sprouts, equaling anything that can be served at that time. I have very fine lots of Curled Greens, Purple Kale and Drumhead Kale, which will not be cut until all the Savoys and Brussels Sprouts are done. When the heads are cut, these again give a great abundance of sprouts. They are then followed by a last early September planting of Cabbage Flower of Spring, followed again by February and March plantings of the above-mentioned varieties, which I find the most useful.

In this way I keep the supply always on the go, and, knowing my demand, I have to scheme accordingly. I never trouble to sow and keep any Cauliflower through the winter, and I can begin cutting very beautiful heads in June. I have hot-beds made in late February for raising early Radishes and Lettuces, and in among these I sow Fisher's Early Forcing Cauliflower and transplant into frames as soon as ready. By this means they are out in the open ground in late April, planted in deep drills made by a three-cornered hoe. This shelters them, and, it being a dwarf grower, they are put out about eighteen inches every way. I must say that I never in my experience saw dwarfier, quicker-growing and more beautiful white heads of the best quality. I then follow on with Early London, Walcheren, Eclipse and Veitch's Autumn Giant. We cut our last supply of Cauliflowers on December 5.

Potatoes are grown in large quantities. I grow Sharpe's Victor, Eclipse, Windsor Castle, King Edward, The Factor and Up-to-Date. My pits will give me a 30cwt. supply of fine dry and good, sound tubers for the next seven months. My general supply has been going on from early August, when Windsor Castle met the demand. Sharpe's Victor was grown in frames and met a special Whitsun week supply. Eclipse I consider a first-class early Potato, so much so that in the present year it will be grown more extensively, to be

followed again by the other varieties. To mention all the other vegetables would be a formidable list, numbering about twenty-seven varieties. Such a place is not always all that is desirable. One has to be very persistent, determined, patient, kind, and to temper justice with kindness in order to get the best out of the men, who I can speak of with a great deal of tenderness and pity for the position they are in.

Sheffield.

V. H. L.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEAS AND HEAVY LOAM (B.).—The Sweet Pea loves turfy loam to root into, but not where it is of too heavy a texture. Add a liberal quantity of old mortar rubble, broken small, a moderate quantity of well-decayed manure, with a slight sprinkling of bone-meal, and mix the whole well together. You will then have an ideal mixture for your bottom spit of your trench for Sweet Peas.

BLUE FLOWERS FOR BED (E. F.).—Seeing that you already possess Ageratum and Heliotrope, and that Lobelia would not be suitable, your only hope apparently lies in the Tufted Pansies. We are, however, not inclined to recommend these plants for hot, sunny positions. Have you yet tried the ever-flowering *Viola cornuta atropurpurea*? If not, we suggest an indiscriminate combination of this and its white variety. They are companion plants, associate well, and because of their distinctiveness are not likely to prove incongruous in any arrangement.

CHRISTMAS ROSES (Aberdeen).—There should be no better way of disposing of the flowers of these plants than offering them to wholesale florists as near to you as circumstances permit; or why not try some of the Scottish markets through the leading salesmen? Unless you had large supplies and could guarantee an unbroken succession of the flowers, the London florist, who can generally get all he requires in London and often at his own price, would not consider it worth his while. The best of all ways is to sell them privately to friends, charging what you consider a reasonable price.

YUCCAS DAMAGED (D. H. H.).—The injury to the section of Yucca stem sent for examination is probably due in the first instance to a twist of the stem, such as might be caused by rough winds. Such wounds are common on Yuccas, and, after a stormy day, twisted and otherwise damaged stems are often noticeable. Very often a section of the branch dies at the point of injury, but only on the side where the greatest damage was done. The good side serves to keep the branch and leaves supplied with food, and the damaged place commences to form a callus of new growth similar to that you send. Not infrequently the roots appear to be too slender to support the heads of leaves—then it is a good plan to provide short, stout stakes; but where a branch is badly damaged, it is better to cut it off and insert it in a pot indoors as a cutting, for roots form quickly.

DUTCH GARDEN (V. D.).—The usual method is to enclose the flower-beds in a rather heavy edging of Box, and pave the walks with a very small pattern of either red bricks or tiles. The smaller these are, the more Dutch they are usually considered, though, for our part, we think them unsatisfactory and incongruous. Naturally, everything has to be arranged on a formal plan, and the more this is carried out with geometrical severity and regularity, despite the fact that it would be in keeping with the object in view, so much the less would it have of our sympathy and approval. The red bricks employed for the pathways, or the red burnt ballast, for that matter, are usually so destructive of the best colour effects the garden might contain that we turn from such formal arrangements to the more natural beauties of the place with a no undignified sigh of relief. We are, indeed, pleased to get away from efforts which savour of the curious and unbecomingly

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Lieutenant-Colonel David Prain, C.M.G.—We are pleased to note in the list of New Year's Honours issued by the Colonial Office that Lieutenant-Colonel D. Prain, C.I.E., F.R.S., Director of the Royal Botanic Gardens, Kew, has been appointed Companion of the Most Distinguished Order of St. Michael and St. George.

Horticultural Instruction in Edinburgh.—It was reported at the last meeting of the governors of the Edinburgh and East of Scotland College of Agriculture that the special committee had practically arranged a lease for three acres of land for a garden between Mayfield and Liberton Roads, and power was given to the committee to complete the lease and to proceed with the scheme, including the appointment of a gardener. It is proposed to have the walls made suitable for wall fruit, to erect an unclimbable fence, and to provide two glass-houses, a potting-shed, a small lecture-room and heating apparatus.

A Pleasing Greenhouse Effect.—In the greenhouse at Kew a custom has long prevailed of arranging the flowering plants in groups or masses instead of disposing them in a mixed-up manner, as is sometimes seen. An unusual but exceedingly pleasing combination noted there the other day was a fair-sized group of *Eranthemum pulchellum* (*Dædalacanthus nervosus* of botanists), dotted over with the bright orange-coloured *Jacobinia chrysostephana*. The *Jacobinia* well overtops its associate, which is laden with its beautiful blue flowers. In this way the prominent features of each are seen to considerable advantage.

White-stemmed Brambles.—As a contrast to the red and yellow branches of certain kinds of Willow and Dogwood and the rich brown stems of various kinds of *Philadelphus* and other shrubs, the white stems of several kinds of Bramble are very effective. In some cases the branches are so uniform in colour that they might have been painted, and this probably gave rise to the common name of White-washed Bramble which has been given to *Rubus biflorus*. In other instances the white or bluish white colour appears as a bloom over reddish or greenish stems, and it is difficult to say which are the more effective. Until within the last few years, the North American *Rubus biflorus* was considered to be the most conspicuous of the white-stemmed kinds. Now, however, it has to share the place of honour with the Chinese *R. lasiostylus*, which is quite as lovely. Then there are other kinds, such as *R. giraldianus*, *R. niveus* and *R. coreanus* from China, and *R. leucodermis* from North America, which all deserve mention. To obtain the best results, plant in rich loamy soil where plenty of room can be allowed for development, arrange for an evergreen or other dark

background, and prune away the old branches each spring. Not the least beautiful aspect of these plants is presented on a moonlight night.

Daphne Mezereum grandiflora.—It is unfortunate that this free-flowering variety of the common *Mezereum* cannot be more easily obtained, for it is one of the earliest plants of the year to blossom, being six or eight weeks in advance of the type when it blooms at its normal time, while flowers occasionally appear during autumn, a fact which has given rise to a second name of *D. autumnalis* being sometimes applied to it. Should the autumn and early winter be mild, the flowers may be looked for about Christmas, and throughout January they are in good condition, fading about the time that the earlier flowers of the type appear, towards the middle of February. In addition to the time of flowering, it will be found to differ from *D. Mezereum* by its larger and richer-coloured blooms.

Trial of New Roses at Bagatelle.—As in former years, a trial of new Roses will be held in the park at Bagatelle, France, in 1912 and 1913. We are asked to state that new Roses should be sent by raisers, and those who have not previously sent Roses for trial should note that, as far as possible, the Roses should be grown in pots. At least five plants of each variety must be sent, to arrive before April 15. These Roses will be planted in beds on arrival, and remain therein until October of the second year, to give members of the jury an opportunity of having them under observation during two seasons, and thus be in a position to determine their relative merits both as regards flower production and habit of growth. The packages containing the Roses should be addressed to Monsieur de Conservateur des Promenades de Paris (Rosarie de Bagatelle, au Bois de Boulogne, à Paris), en Gare de Neuilly-Porte-Maillot-Paris.

Rhododendron dauricum.—The mild weather experienced during the last month of 1911 and the early days of 1912 proved favourable for the development of the flowers of this *Rhododendron*, and during the first week of January plants at Kew were well sprinkled with flowers. It is a native of various parts of North-Eastern China and Southern Siberia, its distribution being given as from Dahuria to Manchuria and Sachalin. Under cultivation it grows from 2 feet to 3 feet high, with bright brown branches and small oval leaves. The type is usually deciduous, although the leaves on some plants may be semi-evergreen. The reddish purple flowers are an inch or more across and showy. A variety called *atroviens* is sometimes seen in cultivation. This has smaller leaves than the type, and they are usually evergreen or semi-evergreen. These very early-flowering *Rhododendrons* require a sheltered corner.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Ipomœa rubro-cœrulea.—Such a sight as that depicted on page 628 of the issue of THE GARDEN for December 30, 1911, is enough to make one long for a district where this charming Ipomœa may be grown out of doors. It is only, however, in such favoured spots as that of South Devon where it can be depended upon to yield such a display in the open ground, and in many parts it will be necessary to treat it as an "indoor vine."—H. P.

The Red-berried Mistletoe.—This distinct species of Mistletoe, whose botanical name is *Viscum cruciatum*, has been in cultivation at Kew, but whether it is still there I cannot say. [Yes.—Ed.] Fruiting examples have been more than once exhibited in the cool portion of the T Range, which is largely given up to Heaths and Pelargoniums. The host plant was the common Olive, and the Mistletoe seemed to thrive thereon. According to the *Botanical Magazine*, it grows usually on Olive trees.—H. P.

A Collection of Herbs.—I am interested in getting herbs together. Could you suggest others for my list, which is as follows: Aniseed, Burnet, Balms, Basils, Borage, Chamomile, Chives, Chicory, Camphor Plant, Comfrey, Coltsfoot, Caraway, Hyssop, Horehound, Horseradish, Lavender, Mints, Marigold, Marjorams, Pennyroyal, Peppermints, Parsley, Rosemary, Rampion, Rue, Sages, Savory, St. Peter's Herb, Tarragon, Tansy, Thymes and Wormwood.—M. J. G. [To this list may well be added Angelica, Alecost (*Tanacetum Balsamita*), Bermagot (*Monarda*), Catmint (*Nepeta Mussinii*), Coriander, Bay, Fennel, Chervil, Sweet Cicely (*Myrrhis odorata*), Sorrel, Southernwood, Woodruff and Parslane.—Ed.]

The Daffodil Schedule of the London Show.—The schedule as printed and disseminated may have a weak place or two, but is probably a better one than would have been entirely put together by the fault-finders. The ridiculous plan adopted by some societies of limiting the value of the varieties shown, and of only allowing such varieties as are in commerce to compete, is not made obligatory. I know nothing of the trade, but speak from an amateur's point of view. A person with small means and a small garden may have six or eight varieties and have raised hundreds of seedlings, and yet be unable to show them where there are such restrictions. I only find two faults with the schedule. In Section 2, Class 11, six long trumpets, Division 1; and Section 3, Class 20, three trumpets, Division 1 (a); Class 21, three trumpets, Division 1 (b); Class 22, three trumpets, Division 1 (c), it would seem better to have given Division 1 the same number of flowers in each section. But as I said before, here is a chance for the small hybridisers. The other mistake, in my opinion, is Class 16, six hybrid triandrus, one stem of each. Why not three stems of each, as in all the other classes in this section? Many of these hybrids, like the triandrus varieties, do not last for many years, and if three stems were exhibited it would show a probability of the hybrid surviving. The single-flower classes, for varieties not in commerce, are a capital way of bringing into notice new varieties, and would induce the Narcissus committee to notice the great difference there often is between first flowers and those of a succeeding year. The obligation of keeping the

name or number once given to a flower to the same should be insisted on.—AGRICOLA.

Tap-rooting Alpines.—The photograph of *Anemone sulphurea* by Mr. Jenkins in your issue of December 8 is very interesting, but it scarcely supports his original contention (see issue of September 30). *A. sulphurea* is well known to vary in root character when grown from seed in this country, but it certainly cannot truthfully be described as a crevice plant, so does not apply in this controversy. Possibly Mr. Jenkins had no better example at the moment, so I am sending you a photograph of one, viz., *Armeria plantaginea*,



ARMERIA PLANTAGINEA GROWING UNDER FAVOURABLE CONDITIONS, WITH ITS TAP ROOT EXPOSED.

raised from seed and planted out when 1 inch high into a roomy bed of suitable soil—not in a crevice. Yet, as you will see, the inherited habit of the plant has prevailed against the temptation of luxurious surroundings, and produced a true tap root which descended further than I was able to reach. Where are the fibrous roots which, according to Mr. Jenkins' original contention, should have resulted from such treatment? I am not suggesting that plants cannot vary under changed environment, but I believe such change to occur by small steps spread over many generations, not as Mr. Jenkins first suggested, viz., that the

mere increase of suitable soil would at once change a tap-rooting plant into one producing fibrous roots only.—REGINALD A. MALBY. [This discussion must now cease.—Ed.]

A Reader's Moraine Garden.—I send a photograph which I hope will prove suitable for reproduction—[Unfortunately, not suitable.—Ed.]—as it may interest some of your readers who, like myself, have tried their hands at "moraine-making" after reading Mr. Farrar's books. My experimental moraine was very tiny, only about two feet square, enclosed by four big stone blocks, with a depth of about 1½ feet to 2 feet of chippings. In this *Saxifraga cœsia*, *Petrocallis pyrenaica*, *Campanula cenisia* and *Edraianthus serpyllifolius* went triumphantly through last winter's damp. In the spring I added to it, and in the new part *Silene acaulis*, *Dianthus alpinus*, *D. frigidus*, *Omphalodes nitida*, *Edraianthus Kitaibelii*, *Androsace villosa* and *Aretia vitellina* have already made large tufts. Though the rest of my garden suffered terribly from the drought last summer, the moraine plants were always green and fresh. The photograph shows *Edraianthus serpyllifolius* in bloom. It had altogether twenty-four blooms, and the effect of the purple bells on the grey stone chippings was delightful.—E. GAGE HODGE, *Huxham Rectory, Exeter*.

Depth to Plant Fruit Trees.—In reply to the note on page 626, it all depends upon the tree and circumstances. In the late spring of 1910 I planted, close down on a rock chalk bottom, trees which had been grafted close down into the Crab stocks. (By the by, I always like to plant trees on Crab in poor chalk soils.) There were no lengths of stock stem at all, and very little length of root, as I use mostly Crab cuttings for stocks. The garden has since been liberally helped with road soil, loam and manure, and the unions are several inches under. The roots are now coming up for food. I think roots will always do this. If on Paradise and in good soil, I like to get all the stock just below the ground. Then the stock seems to swell as fast as the tree proper. If in poor, hot soil, whether on Crab or Paradise, I like to get a bit of the tree proper into the ground, as I fancy it then absorbs moisture through that below-ground portion, which helps until root action is again full on—this in spite of the fact that some varieties of Apple so planted send out their own roots above the union.—APPLE TREE GROWER, *Ken*.

— I do not think there is a majority of gardeners in favour of deep planting. Position, soil, subsoil and natural drainage must play important parts in deciding. My first experience of the evils attendant on deep planting occurred over twenty years ago when serving as under-gardener at Lindley Hall, near Nuneaton, under Mr. Sidney Andrews. We were both engaged in the autumn of 1889, the grounds and kitchen garden having undergone extensive alterations and additions during the previous two or three years at the hands of a landscape gardener. During the following season we found that something was radically wrong with many of the newly-planted fruit trees, including stone fruit of all sorts. Mr. Andrews decided to examine the roots of some, and the men were set to work on them the following autumn, with the result that most of them were buried 9 inches to 12 inches below their previous level. Most of the new trees were lifted and re-planted at their original depth, and straightway they began to improve. Since that time I have always planted to the old mark.—J. C. WADD, *Leicester*.

The National Rose Society and Amateurs.—

In reading the report of the National Rose Society's general meeting, I was pleased to note the great increase of new members, also the financial position of the society. With this great increase of members it is natural to suppose the majority of that number will be competitors, and I think the time has arrived when the prizes should be extended, viz., instead of first, second and third, a fourth ought to be added in many classes, as greater interest would be taken in the competition in the amateur classes. Again, I wish to draw the attention of the committee to the prize-lists of the autumn show. At present there are only two classes in which an amateur can compete, which seems to me rather absurd. Fancy a member from the North of England who would like to compete at this show, and only two classes in which he can compete. What is the result? He abstains altogether, because his expenses are too great. If another class was added, it would be a greater inducement. An additional class of Hybrid Teas to each division would, I think, be more interesting, and would bring more competitors to the show.—W. M.

A Fine Mossy Rockfoil.—

Few of the Mossy Saxifrages are more compact than *Saxifraga pedemontana cervicornis*, and none is more pretty when in bloom. The flowers are similar in shape to those of *S. Wallacei*, though not quite so large. As shown in the illustration, the leaves have longer stalks and are more loosely arranged than at any other period of its growth. Just now the leaves are in dense rosettes and almost without stalks, but they are longer than they ought to be, owing to our mild, open, English winter. When the plant goes to rest in the autumn, the leaves overlap one another closely, like the slates on a roof, and this is the winter state in its native habitats on Monte Gennargentu in Sardinia and Monte Rotundo in Corsica, where it ascends to elevations varying from 4,800 feet to 7,500 feet, for it is truly an alpine species. Under cool conditions the flower-stems are only 1½ inches to 2½ inches high, and the flowers are durable like those of the Snowdrop or Primrose; but if the weather is warm and bright, the flower-stems lengthen, and the flowers soon get fertilised by insects and pass into the fruiting stage, maturing good seeds in abundance. The photograph was taken about the middle of May, when the flower-stems were 4 inches to 5 inches high, or just twice the height they would be in their alpine habitats. Though grown in pots, the plants stand in the open all the winter, and are not affected by cold, but rather by the mildness of our winters, which excites them into untimely growth.—J. F.

FORTHCOMING EVENTS.

January 15.—National Chrysanthemum Society's Executive Committee Meeting at Carr's Restaurant, Strand, London, at 7 p.m.

January 17.—North of England Horticultural Society's Annual Meeting at Leeds at 3 p.m. Lantern Lecture by Mr. W. Cuthbertson on "The Development of the Sweet Pea" at 6 p.m.

THE FRUIT GARDEN.

FRUIT TREES IN GRASSLAND.

IN our last issue we referred briefly to the thirteenth Report of the Duke of Bedford's Experimental Fruit Farm at Woburn. This report is mainly devoted to experiments which have been conducted at the farm for over sixteen years with fruit trees growing in grassland. It has, of course, been well known to practical growers for some years that grass growing over the roots of fruit trees is highly detrimental to them; but until 1903, when the third report of the farm was published, there was no definite data relating to the subject.

The point of most interest in the report now before us is the statement that trees which become grassed over gradually during the course of several years apparently accommodate themselves to the altering conditions, and suffer much less than

substance is, however, readily oxidised into some substance which favours plant growth, and this explains why soil taken from grassland is more favourable than ordinary soil to plant growth after it has been stored for a short time so as to kill the grass. Experiments of various kinds have been conducted with a view to ascertaining whether the grass caused a physical alteration in the soil that would be likely to cause injury; but wherever any change was noted it was favourable to plant growth rather than otherwise.

To the practical grower the following sentence in the excellent summary of the report will, we think, be of the greatest value, because it may safely be taken as a guide under all ordinary circumstances: "To what distance grass should be removed from a tree so as to have no effect on it, must, naturally, depend on the nature and size of the tree, as well as on the nature of the soil; with freshly-planted standard Apple trees, in soil which was not specially favourable to the action of grass,



A MOSSY ROCKFOIL: SAXIFRAGA PEDEMONTANA CERVICORNIS.

when the grass is actually sown over their roots. This, undoubtedly, explains, to some extent at least, why orchard trees which have been growing in grassland for some years do not show the ill-effects of grass to anything like the same extent as young, newly-planted trees do. It is stated, however, that, although a tree may have been well established in cultivated land, it does not prevent it feeling the ill-effects when grassed over. Some trees at the farm which were grassed over four years after they were planted were nearly killed. Nor is the injury confined to Apple trees. Those of the Pear, Plum, Cherry, and even forest trees are almost, if not quite, as badly affected.

Although, as we have already stated, the injury that grass does to trees has been recognised for some time past, the actual way in which damage was done has been more or less a mystery. The experiments at Woburn tend to prove almost conclusively that it is caused by a toxic substance formed during the growth of grass. This toxic

a very considerable effect was produced when the grass was 4 feet away from the stems; on the other hand, keeping a space free of grass extending only 6 inches from the stems of freshly-planted dwarf trees was found to have some beneficial result; even on the Ridgmont soil. The proportion of roots extending into the grassed ground which are sufficient to make the grass effect apparent is remarkably small, amounting in some cases examined to only 1-2,000th of the weight of the whole tree." It is evident from the above that, though the removal of only a small area of the grass from over the roots is beneficial to the tree, better results would be obtained if the whole were removed.

We have, on several occasions, had an opportunity of inspecting the experiments at the Woburn Farm, and know full well that they are conducted with the greatest possible care, and that nothing is left undone which can be done to make the results obtained thoroughly reliable. Thus, in the case of the experiments now under notice, the questions

of soil aeration, moisture, food supply and bacteria were all taken fully into account, and each separately and thoroughly investigated and allowed for in determining that it is to a toxic substance, formed by growing grass, that we must attribute the injury that is caused to trees growing in grass-land. What this toxic substance is does not appear to be known; but, happily, it is capable of being quickly and easily transformed into some other substance, also apparently unknown, which is favourable to plant growth.

THE ROSE GARDEN.

ROSES IN POTS DURING JANUARY.

THESE are one of the most important subjects for cut flowers or for conservatory decoration, and it can scarcely be too strongly insisted upon that all plants should be healthy and well established before forcing them in any way.

Pruning.—If not already pruned, this should be done at once. I like the soil to be rather on the dry side when doing the work. Begin by cutting away all weakly and insufficiently-ripened growths. Well-matured growths of what I may, perhaps, be allowed to style ordinary growers, such, for example, as Catherine Mermet, Sunset, Richmond, Liberty and the two grand newer varieties Molly Sharman Crawford and Mrs. Aaron Ward, may be cut back about two-thirds of their length. Do not leave a quantity of wood in the centre of the plants. However good this may be, crowding in the middle will not produce good results. If quantity of bloom is the main object, we need not study the shape of our plant so much, but retain a larger amount of well-ripened wood.

Starting the Bushes into Growth.—Very little heat is needed at first. A steady break invariably comes stronger, and growth comes on very rapidly after a steady start. We prefer a span-roofed house facing east and west to a lean-to or one facing south. The last is exposed to full sun during midday, with little in the early morning and evening; but when built from north to south the plants receive the full benefit from the morning sun and are partially shaded by the bars during midday.

Feeding with Manure.—Keep the plants well on the move after they have received a good start, giving weak liquid manures twice a week. From 1oz. to 2oz. of guano to a gallon of water is a safe and a very forcing stimulant. The drainage from a cow-stall is also very acceptable to Roses, and we find the ammonia arising from this a decided help in keeping the foliage clean and in good health. Ample drainage is needed, because when in full growth Roses require a considerable quantity of water, and the free use of liquid manures would be apt to sour the compost otherwise. I am strongly in favour of a less number of crocks, assisted by half-inch bones in lieu of the finer pieces of broken pots being used so freely. The bones feed and drain at the same time, while the crocks are of no benefit except to help the drainage. One of the chief points is to avoid excessive fluctuations of temperature, these being most injurious. Often the first signs of mildew and general ill-health can be traced to this cause.

Treatment after Flowering.—By the end of May, when the bulk of the flowers have been

realised and Roses can be had from plants upon walls and other sheltered places, it is well to commence ripening the plants ready for forcing another season. Removing the flowers and gradually withholding water is a good method of attaining this; but to seriously check the water supply while a large quantity of young growth remained would be folly. As the plants ripen more air may be given, and after a time they may be removed to some sheltered position in the open and the pots partly plunged in ashes, sand, or other suitable material. The object of partial plunging is to avoid sudden drought, especially on a sunny or windy day; also to keep the plants from toppling over. A copious syringing overhead will help to keep the wood plump and sound without too much moisture at the roots for obtaining the desired rest and ripening. After six weeks' rest those requiring it may be repotted and again plunged. Turfy yellow loam is generally advised, but this is not absolutely necessary. I have found them do very well in good garden loam, well-decayed manure, with a little leaf-mould and coarse sand, helping them by the free use of crushed bones if the soil is stiff and minus any fibre. Look over the compost closely for small worms. When in the warmer atmosphere it is really surprising how quickly these develop. It is the preparation during the previous season that has so much influence upon the future crop. The earlier and more efficiently they are ripened, the more successfully can they be forced. If fine, the plants can remain outside until the end of September; but if excessive rains prevail, some means should be found for keeping these off. A. P.

SEASONABLE NOTES ON ROSES.

It is in the early part of the year when we generally suffer most from frosts. Formerly the majority of our Teas and Noisettes were tied up and protected; but even those varieties that were considered the most tender are only very slightly protected at the present, and I am inclined to the opinion that we were wont to afford far more winter protection than was needed, or even beneficial to the plants.

Recently a case came before me where the ground occupied by Roses was covered with 5 inches to 6 inches of wood-ashes. This is most unreasonable, for not only is it too powerful a mulching, but the ashes soon become a wet and soapy mess that can never be any protection. The same applies to short manure and any but the coarsest litter. Much the best protection is something that can allow the wet to drain through, rather than conserve it. In the latter case the whole is a frozen mass from only a little frost, and I take it we are fairly well agreed that wet and frost combined are most harmful to plant-life.

The worst point about litter of any description is that it is either battered down into a wet mess or blown quite away from the plants during a frost-laden wind—anywhere, in short, but where it is most wanted. This is a great point in favour of small branches of Fir, Birch or Laurel, which can readily be stuck into the ground to afford shelter from wind. They are also dry and do not heat and coddle the growth, as is too often the case when hay, straw or Bracken are tied among it.

The most vital part of the plant is its base, and to have this embedded in a wet, frozen mess cannot be beneficial. We have frequently made little nicks with the spade, or hoe, to help draw away the surface water from the base of our Roses during winter, and the present wet season has called for

this more than usual. Even if not frozen, the long presence of water at this part should be avoided.

A very safe and excellent plan is to draw up some of the soil to form a mound around the base of the dwarfs. This is a sure protection of the bottom and throws away the superfluous moisture. Many Roses that would otherwise have succumbed will be found sound at the base when the soil is removed, and from this source we quickly get useful growth. A. PIPER.

THE ROCK AND WATER GARDEN.

HEATHS FOR THE ROCK GARDEN.

THE introduction of various Heaths to the rock garden serves the double purpose of providing evergreen plants, which aid in taking off the bareness of the place in winter caused through deciduous subjects dying down, and of the inclusion of plants which bear showy flowers and have a prolonged flowering period. They are, in addition, easy to grow, providing they are not planted where lime is abundant in the soil, and that provision is made for watering in the event of a prolonged spell of dry weather being experienced. For planting in the rock garden it is as well to select quite small plants, for when they have to grow in comparatively small spaces between stones, they may be expected to establish themselves very much better than larger and more showy specimens. Autumn or very early spring is a better time to plant than late spring, for at the latter period very little time is left to establish the plants before hot weather may be expected.

One of the prettiest dwarf Heaths for the purpose is found in the alpine *Erica carnea*. At its best it rarely exceeds 6 inches or 8 inches in height, and is often dwarfer. It, however, spreads well, and may be expected to carpet a considerable space quickly. By cutting back after flowering it may be easily kept within bounds. The rosy flowers of the type are conspicuous from February to May; by making use of the several varieties it is possible to have flowers ranging from red to white. A plant of similar habit, but stronger growing, is *E. mediterranea hybrida*. This blooms throughout winter and spring. Vigorous examples sometimes grow 12 inches to 18 inches high, but more often it is seen from 9 inches to 12 inches in height. It is one of the most floriferous shrubs we possess. The autumn-flowering *E. maweana* should be included among suitable dwarf kinds, for it grows but 6 inches or 8 inches high and blossoms with great freedom. The rich red flowers are larger than those of most Heaths.

A moist position could well be given over to *E. cinerea* and its varieties, for although it is the common Heather of our hillsides and moorlands, it is well worthy of room in the garden. It may be obtained in a variety of colours, red, scarlet and purple in various shades being represented, while forms with white flowers are also to be found. The flowering period extends from July to September. *E. Tetralix* and *E. ciliaris* are perhaps hardly so useful as those previously mentioned, their habit being somewhat inferior.

Several of the taller-growing sorts may be introduced with advantage, either as groups in the background or as isolated plants here and there in prominent positions. The Mediterranean Heath (*E. mediterranea*) grows into a shapely bush 2 feet

to 4 feet high, although under very favourable conditions it may be expected to become much larger. Its reddish flowers appear in March and last until May.

A variety with white blooms may be obtained, also a kind called *nana*, which is distinguished from the type by its low, compact habit. *E. arborea*, the Tree Heath of Spain and Southern France, forms a bush from 4 feet upwards to 18 feet or 20 feet in height in its native country. Here it is frequently met with as a shapely bush 4 feet to 6 feet high. Its dark green leaves serve to set off its small, white, fragrant flowers during March, April and May. It is not very hardy, but a variety called *albina* will withstand more cold.

E. lusitanica, often called *E. codonodes*, a native of Spain and Portugal, is grown largely in the South-West Counties. It may be distinguished from *E. arborea* by its more plumose habit, brighter-coloured leaves and longer, scentless flowers. In some instances it begins to bloom in November or December, and continues until May. Sometimes, however, the earlier flowers do not open until February. The unopened buds are of a pretty pink colour, the expanded flowers white. Between *E. arborea* and *E. lusitanica*, a hybrid, *E. Veitchii*, has been raised. Intermediate in habit between its parents, it inherits good qualities from both, and is very conspicuous. Another early-flowering kind is found in the Portuguese *E. australis*. This is of straggling habit, growing from 4 feet to 6 feet high, usually with a few long, loose branches, furnished with short branchlets, from which the rather large red flowers appear from March to May. Unfortunately, it is of rather tender constitution, hence it is not a satisfactory kind for the colder parts of the country. An autumn-flowering Tree Heath from Southern Europe is found in *E. stricta*. It is of stiff, upright habit, and bears red flowers during July and August.

Spreading Heaths which grow a couple of feet or so high are *E. vagans* and *E. multiflora*, both free-flowering kinds suitable for a position rather far back in the rockery. There are forms with red and white flowers. Most of the Heaths, and more especially the dwarf, spreading sorts, are benefited by being cut over after flowering. This clears away the old flower-heads, saves the energy which would be expended in seed production, and encourages new growth. D.

NOTES ON RECENT NUMBERS.

Late-flowering Roses (page 602).—I have a Rose given me by a neighbour, the raiser, who named it after his wife, Mrs. Allen Chandler, from which I have had superb blooms within a few days of Christmas. It appears to be a near relation of, and is probably a seedling from, the old

Souvenir de la Malmaison. The petals are of solid, almost waxy, substance. Mine is a difficult garden for Roses, on a hot, sandy soil. This Rose is never in a quite thriving condition and makes but little growth, but the fine late bloom shows how valuable it would be in a soil more sympathetic to Rose nature.

Ferns in Towns (page 602).—The common Male Fern is one of the best of town plants, thriving in narrow, sunless areas and in nearly all conditions. Not only does it do well when planted, but if a plot of ground, even in the heart of the City, should be vacant for a year or two, this fine hardy Fern is likely to grow spontaneously.



THE EXQUISITE HYBRID ORCHID BRASSO-CATTLEYA MARONIÆ.

Solomon's Seal, which associates so well with Ferns, is also a capital London plant, and one of the best of flowering subjects for a shady place.

Late Flowering of Yuccas (page 603).—All my best plants of *Yucca gloriosa* threw up flower-spikes in November. It was sad to see the waste of energy at a time when the blooms could not possibly expand out of doors. In the hope of turning them to some account we cut them and put them in a large pail of water in a warm greenhouse, slinging them in an upright position with strings to the wired rafters. Except the youngest, they all opened, and the blooms could be used indoors, but they had not their usual substance and went off rather soon. G. J.

THE GREENHOUSE.

BRASSO-CATTLEYA MARONIÆ AND ITS ALLIES.

ONE of the greatest triumphs of hybridisation was the intercrossing of the genera *Cattleya* and *Brassavola*, which are known by the compound name of *Brasso-Cattleya*. The *Brassavolas* are few in number, the principal species being *B. digbyana* and *B. glauca*, but only a few hybrids have been raised from the latter. The former, however, has been largely employed by the hybridist, and one of the best hybrids, which is sometimes quoted as *B.-C. digbyano gigas*, but is correctly known as *B.-C. Maroniæ*, is shown in the illustration. The flowers are large, well proportioned and a soft mauve throughout, excepting for a faint tinge of yellow in the throat of the lip. The chief characteristic is the beautiful fringed margin, which it inherits from *B. digbyana*, a feature that is transmitted to all its progeny, even to the second generation.

Other desirable plants are *B.-C. Thorntoni*, *Gratrixæ*, *digbyano-Mossiæ*, *Mrs. J. Leemann*, *Marie*, *digbyano-Mendelii* and *Groganiæ*. Both the *Lælias* and *Lælio-Cattleyas* have been crossed with *B. digbyana*, and collectively they make a bold display, while a few are, as a rule, in flower almost throughout the year. So far as culture is concerned, they require similar treatment to *Cattleyas*—in fact, they may be cultivated in the same house—but it is advisable to arrange them in a separate batch, say, at the warmest end of the structure, where they can receive a little more sunlight than is generally given to *Cattleyas* and *Lælias*. Most of the *Brassavola* hybrids possess a strong constitution, and, providing the rooting medium, which consists of *Osmunda* fibre one-half, peat one-fourth and chopped sphagnum moss one-fourth, is kept in a sweet condition, little difficulty will be experienced in bringing them to perfection. The subject of this note and illustration will,

no doubt, always be known in gardens under the popular name, *B.-C. digbyano gigas*. SENTINEL.

SOME OF THE NEWER PELARGONIUMS.

THESE valuable and showy plants were rather in the background for a few years, but, as with all really good flowers, the neglect was merely temporary. It is, of course, usual to hear scoffing remarks made regarding our old friend the Geranium, such as "Anybody can grow these," or "Oh! I don't care for these flowers—they are so common"; but I have noticed that the people who despise the Zonal Pelargonium are usually those who cannot grow it well. Like most

other plants, this demands skilful attention if we are to have plants and flowers worth looking at. This is hardly the time or place to enter into details of culture; but at some future time I hope, with the Editor's permission, to give my own methods of growing these old favourites.

My present intention is to say a few words regarding some of the more recent introductions, both in the Zonal and Regal sections. I do not claim that my list of varieties includes the latest novelties, but, rather, that it gives only such as have been proved to be of outstanding merit.

Zonal Pelargoniums.—Those who have never seen a good collection of the modern sorts would be startled by the immense improvement, in size of pip especially. Trusses, too, are much larger than of old, while shades are greatly varied to what they were thirty years ago, when the Zonal was held in greater repute than now. I prefer the single-flowered varieties, although many of the semi-doubles are grand in size and colour and valuable for cutting. Lady Curzon is a bluish pink, with grandly formed, huge trusses. This is the finest of this shade I have seen. Mauretania has a pale salmon centre, shading to almost white at the edges of the petals, a variety that takes the eye of every visitor. Large trusses and beautifully round pips. Flowers freely and for a long season. Civic is of rather deeper salmon shade than Mauretania. A perfect truss and pip. Dwarf habit. St. Louis is the largest pip I have yet seen. Brilliant scarlet crimson, with large, distinct white eye. Unfortunately, the plant is a rather weak, straggly grower, and the truss rather loose. Dublin is described in the catalogues as rosy magenta, but this does not do it justice. I should call it nearer rosy crimson. Immense truss and pip. The Sirdar is almost as large as St. Louis, and a far better doer. Crimson scarlet, with white eye. Grand truss. Hall Caine is one of the very best. Truss and pip large and of perfect shape. Colour, brick red. Sir Thomas Hanbury is a great bloomer, early and late. Top petals scarlet, lower tinged magenta. A distinct white eye, truss and pip large. Lady Warwick is white, with pink edge. A good truss, and free bloomer. Snowdrop is a grand white. Truss large and goes off without turning pink. Mrs. Brown-Potter is the best bright pink. Large truss and perfect pip. Duchess of Roxburghe is deep salmon, one of the best of this colour. Berlin is scarlet self, large and of great substance. Phyllis.—Colour, a mixture of salmon and bright rose. Immense trusses and pips. One of the best. Olivia is one of the best salmons. Very large. Of bedding varieties, Paul Crampel and Mrs. Robert Cannell make grand pot plants. These, if properly handled, will give grand trusses, and their respective shades of scarlet and salmon are unequalled.

Regal Varieties.—If great strides have been made with the Zonals, what can be said about the wonderful advance in this section? The blooms are produced as abundantly as in the old varieties, while truss and pip are easily three times the size. The shades of colour, too, are varied and beautiful. Here are some of the best: Bridesmaid, Dairymaid, Mrs. W. J. Godfrey, Exmouth Rival, Loveliness, Martha Bouchier, Market Favourite, Ruby Acquisition, Attraction, Magnificent, Duchess of Teck and Edward Perkins. The last-named is, of course, a very old sort, but is still at the top in its own particular colour. I have not attempted to describe the colours in this section, as to do so would require a good deal of space, but

The flower-head is fairly large, roundly formed, and of a clear butter yellow tone. It received an award of merit last month from the Royal Horticultural Society when shown by Messrs. William Wells, Limited, Merstham.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Early Peas.—It is quite impossible to have excellent Green Peas in use too early in the season, and equally impossible to maintain the supply unbroken over too long a period. Successive sowings must be made and the varieties carefully chosen. Before the end of this month seeds should be sown both indoors and out, provided in the latter event that the soil and the weather are favourable. Choose for the purpose a dwarf-growing, early-podding variety—and there are many such on the market. Indoors the seeds may be thickly sown in boxes or pots containing a light mixture of loam, refuse manure and sharp sand, the surface being made level and firm and the seeds covered to a depth of about an inch. Keep the soil just moist in the greenhouse and germination will commence quickly. The young plants must be grown steadily and uninterruptedly in full light and with abundance of fresh air. Sow out of doors when the conditions permit of it, forming shallow, flat-bottomed trenches for the reception of the seeds, and allow plenty of space. When all the stages are favourable in both instances, the indoor-sown seeds will yield pickings fifteen days in advance of the same variety sown out of doors on the same day.

Jerusalem Artichokes.

—Because these plants are so commonly pressed into service as screens to hide some objectionable feature of the garden is no reason why they should be so carelessly grown. The finer the plants the better the screen, and success will only be achieved when the ground is deeply dug and generously manured. For planting, which should be put in hand as soon as suitable weather occurs after the preparatory details have been ac-

complished, choose small tubers of even shape, and allow 15 inches to 18 inches asunder in lines 3 feet apart.

Seed Potatoes.—Sets of the earliest varieties will have been upended in boxes for sprouting some time back, and successional batches must now have attention. Although any shallow boxes will answer the purpose, those with sides narrower than the ends are preferable where space is restricted, as they can be stacked to any convenient height. In any case it is essential that there shall be full light and unlimited supplies of fresh air, in order to encourage strong, healthy sprouts, rather than the spindling apologies for sprouts that



THE NEW SINGLE CHRYSANTHEMUM JOSEPHINE. (Much reduced.)

all are distinct and give grand trusses of great beauty.

C. BLAIR.
Preston House Gardens, Linlithgow.

CHRYSANTHEMUM JOSEPHINE.

A GREAT many new Chrysanthemums have quite recently been introduced, thereby adding to the multiplicity of existing varieties. Some of the new ones have come to stay, but the majority will soon pass into oblivion. There has been a wonderful improvement in the singles, and on this page we illustrate one of the best novelties of this section. It is a delightful flower named Josephine, and is a variety that will prove an acquisition to its class.

one sometimes sees. If the light comes from one side only, turn the boxes every third day, and where stacking has to be resorted to, the tubers in the middle of the boxes should be brought to the sides, the change being effected at least once in every seven days. It is customary in many gardens to sprout only the early varieties, but all should be done if possible.

Leeks and Celery.—For very early supplies, seeds of these valuable crops may be sown during the forthcoming two or three weeks. It is, of course, necessary to sow in boxes in a greenhouse, and in no circumstances whatever must any attempt be made to hurry the germination or to force on the seedlings when they appear through the surface. Incessant advance at a steady pace ensures strong, healthy plants, which can be easily hardened for planting out when the correct time comes. For the seed boxes the usual compost of loam, leaf-mould and refuse manure should be requisitioned, enough sand being incorporated to ensure porosity. Pleasant moistness of the soil is required, and trouble in thinning will be obviated by very thin seeding.

The Cabbage-Bed.—This is, perhaps, the most important quarter of the vegetable garden in the early months of the year. The man who grows for home use seldom has too great a supply, while the man who cultivates for market expects to secure a handsome monetary return from his stock. To endeavour to hasten growth by the application of nitrate of soda as early as the present date would be unwise in most districts, but progress may be advantageously encouraged by incessant hoeing when the soil and the weather will permit. Run the blade through about an inch beneath the surface, both in and between the lines of plants. H. J.

SOME OF THE BEST VEGETABLES DURING 1911.

(Continued from page 11.)

Onions.—These, when raised under glass and planted out, were, generally, a great success, the quality being much superior than is usually the case and their keeping properties excellent. A good strain of Ailsa Craig is yet the best when large bulbs are required, and James' Long Keeping and Main-crop are still among the best for smaller specimens and for late keeping.

Potatoes.—Seldom have I seen these lift in better condition, being very free from disease and of first-rate quality. Windsor Castle, Up-to-Date and King Edward VII. were good, the latter remarkably so.

Savoy.—The late plantings of these, where the ground was in good order, have made a fine growth, and will prove of extreme value during the winter. Best of All, Perfection and Drumhead are splendid varieties.

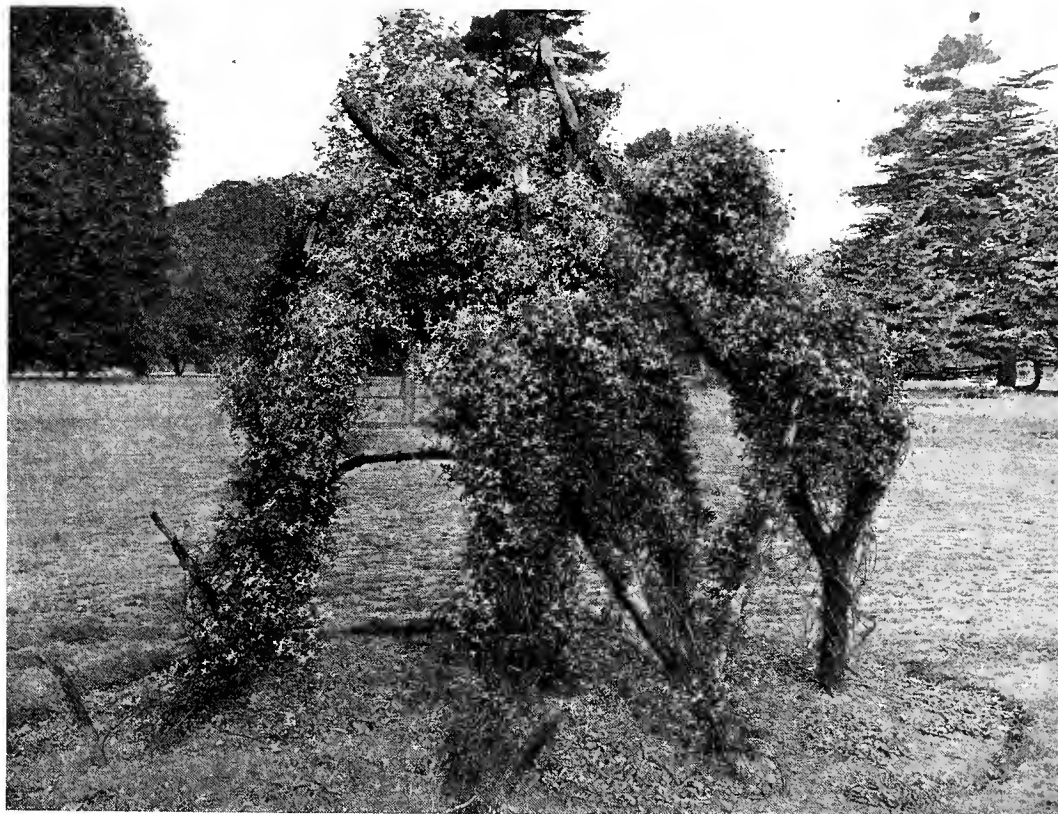
Tomatoes.—Never before have I seen these flourish in the open so well as they did last summer, much of the fruit ripening to perfection, and indeed in many instances equalling any produced

under glass. Owing to the hot weather the demand was great, and growers must have been satisfied with the results. Sunrise still holds its own as quite one of the best varieties out of many which have been introduced, and is alike good either for inside or outdoor culture. The yellow varieties, though in many cases quite equal to any of the reds so far as flavour is concerned, do not seem to find public favour. Why, I am at a loss to understand.

Vegetable Marrows.—Strange to relate, this crop was anything but satisfactory, the supply being a long way below the demand. This was particularly noticeable where good provisions in the way of manure were not given. Pen-y-byd and Moore's Cream were the two best here.

E. BECKETT.

Aldenham House Gardens, Elstree.



AN ARTISTIC METHOD OF GROWING CLEMATIS FLAMMULA AND OTHER FREE-GROWING SPECIES.

TREES AND SHRUBS.

CLEMATIS FLAMMULA.

CLEMATIS FLAMMULA, otherwise known as the Fragrant Virgin's Bower, is a vigorous climber, and one of the oldest species of Clematis in cultivation. It is a native of Southern Europe, and was introduced as far back as the sixteenth century. In this country the flowers are produced any time from July till October. These are white or creamy white; but as the species is extremely variable. The fruits are white and leathery and, like the foliage, are borne well into the winter; but at this time of year the plants present a lifeless mass of brown leaves and apparently dead wood. The lifeless

POTATO EARLY MIDLOTHIAN.

WHEN growers are scanning the new seed lists for 1912, they may with advantage make a note of this variety and give it a trial. In my opinion, as an early good all-round variety, the above heads the list. It is a white Kidney, a handsome tuber, with very shallow eyes and splendid table quality. It is a heavier cropper than many of the first earlies; this to a small grower is a great gain. Another strong point is that I do not know of any other early Potato that turns in so rapidly. I do not advise too early planting even for this variety, as, owing to its rapid growth, it makes up any lost time, whereas any variety planted too early gets a check which delays instead of promotes growth. Planted in March last, I dug this variety in fourteen weeks. The tubers were large, and there was an absence of small, useless ones, W.

appearance of the plants in general has often led the novice into the error of severely cutting them down to within a few inches of the ground. It is true that Clematis Jackmani and strong-growing varieties of this type answer very well to such treatment, but many others, such as Flammula and lanuginosa, although not necessarily weak growers, do not require to be severely pruned. All that is necessary is to remove all dead parts and to thin and shorten back shoots when they are overcrowded. March is generally considered the best month for pruning Clematises.

Clematis Flammula is well adapted for growing over the stumps of old trees. At Kew, like others in the collection, it is trained over gnarled poles placed, as a rule, triangularly and tied in at the top. There are many forms of C. Flammula, and our illustration is of the variety rubro-marginata trained in the manner described.

THE AMERICAN SWEET OR RED GUM.

THE tree which is known to Americans by one or other of these names is only met with in British gardens as a decorative subject, yet in the United States its timber holds an important position in the lumber trade. In England its common names are rarely used, and we are more familiar with it as *Liquidambar styraciflua*, the name given by Linnæus. The name of Sweet Gum originated on account of the fragrance given off by the leaves when crushed, while that of Red Gum indicates the colour of the heart wood. These, however, are not the only common names applied to the tree or its timber, for Yellow Gum is a trade term applied to the yellowish, soft wood, while the familiar cabinet wood which is known as Satin Walnut is also the wood of this tree. It is unfortunate that the same name, or a very similar one, is sometimes given to two totally different woods; yet the adoption of a new name for an old wood is sometimes sufficient to make a success of what was formerly an unmarketable article. Thus Yellow Gum was looked on with disfavour by manufacturers, but when an enterprising English buyer sent home a cargo of wood of the same tree under the name of Satin Walnut, it quickly became popular for the manufacture of the cheaper grades of furniture and for other work. By the confusion of the Red Gum of America with the Gums of Australia, unfortunate and expensive incidents have arisen, for from the timber of some of the Gums, or species of *Eucalyptus*, from Australia the very best paving-blocks are cut. People were induced to purchase blocks of American Red Gum for the street paving, with the result that it was too soft for the purpose, and ample signs of its unsatisfactory character were soon forthcoming. Although it is an important timber tree in America, there does not appear to be any good reason for supposing that it will ever be of any value as a timber tree in this country, for there are other trees which form timber at a quicker rate. It might, however, be more frequently employed for decorative planting, for a single tree bears no comparison to the effect made by a group in the landscape, while it might readily form the subject for an avenue where something a little out of the common is desired.

The most attractive period for the Sweet Gum is autumn, for at that time the Maple-like leaves are brilliantly coloured, various shades of red, bronze and yellow being conspicuous. At other times the glossy surface of the foliage makes the tree attractive, and that, combined with the fragrance and moderately thick texture, easily separates it from the Maple. Under favourable conditions trees 50 feet or 60 feet high may be obtained in this country, but the species grows larger in America. Moist, loamy soil and a somewhat sheltered position offer the most satisfactory conditions. Increase may be effected by imported seeds or by layers, the latter being the more common method. For propagating purposes old stools are often seen in nurseries. These produce a large number of shoots each year, which are pegged down in March. As a rule, a sufficient number of roots have been formed by autumn to allow of the young

trees being severed from the parent stock. *L. styraciflua* has been an occupant of English gardens since 1681, but the number of mature trees is very small. It has never been planted so widely as many other exotic trees of more recent introduction. D.

CARYOPTERIS MASTACANTHUS.

THE *Caryopteris* belong to a small group of shrubs of the Natural Order Verbenaceæ. These include the Scented Verbena, or Lemon Plant (*Lippia citriodora*), *Callicarpa purpurea*, *Vitex Agnuscatus*, *Clerodendron foetidum* and *C. trichotomum*. All these subjects may be said to be on the borderland of hardiness. In comparatively warm and favourable localities, all of them will thrive in the



FLOWERING SHOOT OF THE LITTLE-KNOWN SHRUB,
CARYOPTERIS MASTACANTHUS.

open garden; but in cold, bleak gardens, the shelter of a south or west wall is desirable. Under almost tropical conditions of last year, all the plants named above have flowered with exceptional freedom. This *Caryopteris* is a native of China, the year 1844 being recorded as the date of its introduction into this country. The clusters of pale lavender blue flowers are borne on peduncles an inch long in the axils of the leaves, towards the ends of the new growths. The flowering season is September and early October. Cuttings inserted in a close frame in autumn form a ready means of increase. The *Caryopteris* should be planted in well drained and fairly light soil.

A. O.

THE WOODLAND GARDEN IN WINTER.

THE short note in a recent number (page 619) does but little justice to the enjoyment afforded by such pleasant places in midwinter. In the first place, they are full of beautiful colour—not, of course, the colour of flowers, for flowers there is none, but their absence makes one all the more enjoy the wonderful colouring of the woodland itself, the purple greys of the masses of leafless twig and branch, the many subtle tints of tree bark, the velvet green of the moss, and the bright ruddy tones of the wet, dead Bracken and Beech leaves. Then a slight mist will alter the whole aspect, throwing back the planes of vision to apparently increased distances, creating mysterious illusions, and, by reducing or half obliterating detail, giving that fine quality of breadth and simplicity that goes to the making of a picture.

At no time of the year does one have a better reward for constant watchful care in the matter of tree arrangement and grouping, and at no time, in the ever-growing woodland, can one better judge—aided by the slight mist—which trees had better be removed and which should be retained. Then on the clearer days how grandly the silver-barked Birches stand out against the glistening Hollies—how delightful is the tender grey-green of the Junipers and the full, deep richness of the Yews!

Except for the thinning of trees and careful adjustment of undergrowth, a little occasional closely-restricted planting and such work as clearing Brambles, the woodland requires but little labour. In summer its demands in work are confined to the mowing of the broad grass rides that traverse it, so that in the winter it is the greater pleasure to minister to any need that arises. Last year, after the recent hot summer, there was a fine crop of Spanish Chestnuts. Out of some half hundred trees of some size, four trees produced quite large fruits, as large as the smaller of those imported from the South, and of excellent quality and flavour. We have collected a bushel or two of quite handsome Nuts. But the ground beneath the trees is encumbered with Bramble and wild Honeysuckle and seedling Oak and Chestnut, and it is troublesome to find the Nuts that fall into this ragged and thorny tangle. We are, therefore, clearing the ground completely under these well-bearing trees, so as to be able to collect in comfort the harvests that any later

warm summers may bring. Every winter there is some such service demanded by the tamed woodland—tamed, though never so much tamed as to lose its own wild character. If the woodland garden is left uncared for, there is more than an element of risk that some of the welcome flowering plants would in time become crowded out. A perennial need is the rooting up of an over-rich growth of Bramble, though a certain amount is permitted and even encouraged in the portions where it is the natural undergrowth; but it has to be removed where the ground is carpeted with Lily of the Valley, and kept quite low where there are Daffodils.

G. J.

GARDENING FOR BEGINNERS.

HOW TO PROPAGATE THE CALIFORNIAN TREE POPPY.

ROMNEYA COULTERI is a showy plant, known as the Californian Tree Poppy, since its flowers resemble the Poppy. The blossoms are from 4 inches to 6 inches across, pure white, with crinkled petals and golden yellow stamens, while the foliage has a pleasing glaucous hue. There are two methods by which this glorious perennial can be increased, viz., by root cuttings and from seed. The latter is either sown directly it is ripe or in the spring. The writer has produced a few plants in this way by sowing the seed in well-drained pans and then placing it in a cold frame, where germination took effect in five or six weeks. A difficulty arose, however, when the plants were large enough to pot off, for only a small number recovered from the check. If it is decided to adopt this system of reproduction, I would recommend one or two seeds being put in a small pot of light, sandy soil, and when the seedlings appear, to thin out, only leaving one plant, thus preventing any cause for disturbing the ball of roots.

If a specimen of *Romneya Coulteri* is taken from the open ground, a large quantity of suckers or thick, fleshy roots will be noticed, and it is from these that a fresh batch of plants can be procured. It should be borne in mind that it is not necessary to dig up a plant for this purpose, especially where only a small number is required, for with the aid of a spade or trowel enough could be obtained from around the outside, thus leaving the specimen in the ground. The piece of root should be from 2 inches to 4 inches in length when it is ready for inserting in either pot, pan or box, which ought to be filled one-third of its depth with drainage, then a thin layer of fibrous loam or moss and a small portion of compost. The cutting should then be laid in position, either flat or at an angle, but it must be quite covered with soil, and in a month or so it will commence to grow, pushing out several shoots, as shown in the illustration. The root may then be severed as indicated. The rooting medium consists of loam, leaf-mould and silver sand in equal parts, which should be pressed moderately firm so as not to injure the cutting. A cool house or frame where frost is excluded is best suited for them during the winter months; but later on, as growth advances and the pots become full of roots, additional root space must be provided. At this repotting the compost may contain more fibrous loam and less sand, while the size of the receptacle will depend upon the progress made; but as a general rule pots 4½ inches or 6 inches in diameter will prove convenient sizes. When these are filled with roots, the plants may be removed to their permanent quarters. It should be borne in mind that *Romneya* rather resents disturbance, and for this reason cannot be replanted with success.

At one time it was considered half-hardy, but it will stand a fair amount of frost, and I have

seen some nice examples from 4 feet to 6 feet high growing in the South and Midlands, while, of course, it thrives in such favoured localities as Devon and Cornwall. Some years ago a remarkably fine example was to be seen flourishing in a cottager's garden at Croydon, and there is no reason why it should not be more extensively cultivated by amateurs.

The best position for *R. Coulteri* is where it can get plenty of sunlight, away from overhanging trees, and in a deep, rich, sandy loam; then it will succeed and produce its snowy white blossoms from early summer till the autumn is well advanced. Many corners on the south or west side of the dwelling-house could be found for a plant, which would prove a source of pleasure to the owner, while he would possess a member of the floral kingdom that has been



ROOT CUTTING OF ROMNEYA COULTERI THAT HAS STARTED INTO GROWTH. IT IS CUT INTO LENGTHS FOR PROPAGATION.

described as, "a herbaceous perennial of the first water." S.

RAISING VEGETABLE AND FLOWER SEEDLINGS.

THE time will soon come when gardeners will be busy sowing seeds of both flowers and vegetables in boxes, pots or pans. Every year the experienced cultivator finds better results from thin rather than thick sowing, and I am quite sure that the beginner will be much more successful if he adheres to the practice of thin sowing. Seeds may be sown as thinly in pots as in boxes, but it is very rarely that they are, and consequently the overcrowding causes weakly growth. It is a fact that seeds germinate more evenly and quickly in the dark than when exposed to the light, and with this end in view cultivators generally cover the seed-boxes or pots with glass and brown paper. I used to do this myself, but I have found that it is not altogether a good plan, as, however careful one may be, the seedlings are weakened very much.

If well—that is sufficiently—covered with suitable soil, the necessary darkness is secured, and then by giving proper attention to the watering, never allowing the soil to become dry and, on the other hand, refraining from keeping it in a sodden condition, the seedlings will never be checked, but grow strongly from the commencement. The best way to give water is to immerse the box or pot in a vessel of water and keep it there, held quite level, until the surface soil becomes dark with the rising water; then as carefully lift out the box. Very frequent watering will not be necessary. Seedlings so raised and kept in a light, not necessarily sunny, position in a frame, pit or greenhouse will be sturdy and soon grow into fine specimens. It is the long-stemmed, weakly plants that prove so disappointing. Early transplanting is essential. Old boxes should be painted with formalin before being used a second time; then fungus growths will be destroyed. SHAMROCK.

HOW TO START OLD FUCHSIAS.

THE Fuchsia is a fairly easy plant to grow, more so during the first year than afterwards. One often sees badly-shaped old specimens, this being due to their wrong treatment at the beginning of the year. The old plants need judicious pruning, the reduction of the old ball of soil, and also some root-pruning; then there will be no difficulty in growing very fine, compact specimens both in the form of pyramids and bushes. We will presume that the cultivator possesses a number of old plants which are now lying with dry soil under the stage of a comparatively cool house. These plants must be brought out, placed on a stage where they will get all the light possible, and some fresh air when the weather is not very cold or frosty.

Then the old stems and shoots must be syringed, and in about a week's time the soil should be thoroughly moistened through. In a very short time new shoots will grow, and the dead ends of old stems must be cut off, also others if necessary to the formation of a good plant. Weakly inner shoots will need removing if they tend to overcrowd. The object should be to encourage strong shoots to grow instead of a mass of weaklings. When the young growths are 1 inch long, shake off nearly all the old soil from the roots, carefully prune back ill-shaped roots and repot the plants. Place them in rather small pots to begin with, allowing just sufficient space for a small quantity of new compost. The future repottings must be done as the plants need more rooting space, and in this way very beautiful plants may be grown. A suitable compost is one as follows: Old fibrous turf, two parts; leaf-soil, one part; sand and rotted manure, one part. To a bushel of the above ingredients add a 7-inch potful of old mortar rubble. The necessary feeding should be done when the plants possess plenty of young roots. B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Chicory.—This salad forces remarkably easily. Place five or six crowns in a 9-inch pot in almost any soil and cover with an inverted pot. Keep absolutely dark and warm, and well soak with water when potted.

Rhubarb.—Lift crowns of a well-known early variety that have become well established, lightly cover with soil, and place in the Mushroom-house or dark shed. Syringe or damp with tepid water. Rhubarb can often be accommodated under a stage in the warm greenhouse.

Mustard and Cress.—Sow in shallow boxes fairly thickly, and press the seed with a flat board on to the soil which has been passed through a fine sieve for the surface. Cover with a slate until well germinated, when this should be removed.

The Conservatory.—No pains should be spared to keep this as attractive as possible at this season. Watering should be done early in the day, and the plants kept as tidy as possible. Give a circulation of air whenever the conditions outdoors permit. Gradually introduce supplies of forced bulbs for succession. Plants that have done duty and which are required for stock purposes, such as Salvias, Chrysanthemums and Eupatoriums, are best if neatly cut down and transferred to some suitable position and watered sparingly for a time.

Tree Carnations.—Continue to root cuttings of these if more are required. This is best performed by pulling the growths clean out with the thumb and forefinger when about three inches long, and inserting them in a fine and very sandy compost in a close greenhouse temperature, where they should remain until rooted. Then pot singly and stand on a shelf near to the glass. After they have recovered from the shift, neatly remove the points of the growths.

Cyclamen.—Assist these with properly-diluted manure-water at intervals, never allowing the plant to become thoroughly dry before doing so. Avoid pouring the water over the crown of the plant, and remove decayed leaves and flowers by pulling the stems clean out, not cutting them with a pair of scissors, which causes that portion left to rot.

Planting Fruit Trees.—While the present mild open weather lasts, continue to plant fruit trees. In the event of trees arriving during frosty weather, place them where they may thaw gradually. Avoid the use of too much manure when planting, a much too common mistake. No manure should be placed in close proximity to the roots. Where the ground is retentive, add some old mortar rubbish to render the soil more porous, and the addition of some good fibrous loam and bone-meal is an advantage. Plant as near as possible to the same depth as the tree was before and remove damaged roots with a sharp knife, always cutting from the under side and towards one's self.

Pruning.—This will soon be engaging the attention of the fruit-grower. Where much has to be done, make an early start.

Raspberries.—These will benefit if the ground be now cleaned, lightly forked up, and a mulching of good decayed farmyard manure applied.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Vines.—It is usual to begin the forcing of Vines and Peaches at this time, the fruit-houses having been unventilated for a week or two previously. Vines need not be given a day temperature of more than 55°, and at night, towards morning, a drop to a little below 50°. Syringing Vines to induce the buds to break is being disregarded by an increasing number of thoughtful gardeners.

Peaches.—About the same temperatures suit these, or a little less during the mornings. An exaggerated temperature induces the bursting of the leaf-buds too long before the flower-buds, to the detriment of the crop. It is essential that the borders be kept in a regularly moist condition, but not to waterlog them.

Tomatoes.—If not already done, seeds of an early-fruited sort should be sown at once, using for them a very light compost, such as loam two parts, leaf-soil one part, and sand one part. Moisten this thoroughly after filling the seed receptacles, scatter the seeds very thinly over the surface an hour subsequently, and just cover the seeds with a little of the same compost. Place a piece of dimmed glass over each pot and stand in the warmest house available. Nothing further should be needed till the seedlings are ready to transfer to boxes or small pots.

Hyacinths.—The earliest batch will now be flowering or nearly in flower. If placed in a fairly cool conservatory, very infrequent watering will suit; if in a warm one or heated apartments, they will need daily attention. Another batch should be in the forcing-pit, each covered with an inverted flower-pot, and with the growths 2 inches or so long. A third batch should be in a pit at about 50°. The third batch of Roman Hyacinths should be well advanced, and later lots will come on nicely in a temperature of 50°.

Tulips.—Our earliest lot was in bloom over a fortnight ago, the variety being Proserpine. Quite a number of varieties force from this date with facility. They ask for a high temperature till the colour shows, and should be covered as recommended for Hyacinths to draw up the stalks and foliage. Much diluted manure-water is appreciated, or just a pinch of sulphate of ammonia to the gallon may be substituted. This clears and deepens the colour of the flowers.

Narcissi.—Paper-White is the best for flowering at this date, the finer species and varieties resenting too early forcing. Potfuls of Victoria and Golden Spur that have the stalks advanced a few inches may safely be removed to a hothouse. Kept in the dark and fairly soaked with water, the stalks will lengthen almost immediately and the flowers follow quickly. To succeed these, more of the same kinds of *Telamonius plenus*, *Horsfieldii* and *Sir Watkin* should be coming on in an intermediate temperature.

Chrysanthemums.—There is still abundance of bloom to carry the supply over another few weeks. Exceedingly careful watering is necessary, else the stalks get weak. The greater portion of cuttings for next winter's plants should be taken, and mother plants that have done flowering disposed of so that space may be obtained for other plants.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

Cutting Back Large Trees.—As a general rule, it is not advisable to plant trees that will grow to a large size in small town gardens. Some are, however, already growing in them, and in many instances their spreading branches interfere with the shrubs and smaller ornamental trees or block up the paths. Branches must then be cut off, and the present is a good time for carrying out the work. If possible, the branches should be so cut that their removal will not cause a big gap. Each branch must be cut off close to the main stem or trunk of the tree, so that the wound will heal quite clean.

Good Perennials to Plant Now.—These plants may be put in any time while the soil is fairly dry and the weather is open. The following kinds and varieties will do very well in town gardens and yield flowers from spring throughout the summer until late in the autumn: *Doronicum*, *Sedum spectabile*, *Aquilegia*, *Campanula carpatica*, *C. latifolia macrantha*, *C. muralis*, *Arabis* (single and double flowered), *Alyssum saxatile compactum*, *Achillea Eupatorium* and *A. The Pearl*, *Anemone japonica alba*, *Centaurea montana alba*, *C. n. rubra*, *Chrysanthemum maximum*, *Delphinium* in variety, *Geranium armenum*, *Helenium superbum*, *H. pumilum magnificum*, German Irises, *Lychnis chalcidonica*, *Mallows*, *Phlox* in variety, *Asters* (commonly called Michaelmas Daisies), double and single flowered *Pyrethrums*, *P. aliginosum* (white) and the variety *roseum*, *Rudbeckia Newraanii*, *Scabiosa caucasica*, *Solidago canadense*, *Spiraea Aruncus*, *S. palmata elegans* (where the soil is naturally moist), *Statice latifolia*, *Tritoma corallina*, *T. Uvaria* in variety, *Veronica longifolia subsessilis* and *V. elegans*. To these may be added border Chrysanthemums.

Cleaning Hedges.—Division and boundary hedges should always be well cared for. Very often they are overrun by long, coarse grasses and weeds, and then their appearance is unsightly. Furthermore, the hedge plants do not thrive as well, and neat fences of this kind set off to advantage flowers and other plants within their bounds. The present is a good time for the clearing away of all weeds and foreign matter found at the base. Hedges are rarely fed with any manures. Of course, it is not advisable to induce a gross growth, but a consistently healthy one cannot be had unless assisted by manure and good loam annually after about six years from the time of planting.

Pyrethrums, Polyanthuses and Primroses.—The single-flowered Pyrethrums are more suitable for town gardens than the double ones, although the latter grow and flower fairly well. The clumps possess roots in abundance, and they penetrate the soil very deeply, going almost straight down. So to be successful with these plants the soil must be deeply dug or trenched to a depth of about two feet. Some of the choice strains of Polyanthuses and Primroses often fail during the winter months, while the coarser strains are rarely harmed. If the large leaves turn yellow, the cultivator must carefully examine the plants and, while the soil is dry, press it firmly with the hands around the roots, and also carefully remove any soil that has lodged in the centre of the plants, as it often causes the whole plant to decay.

TOWN GARDENER.

THE BEST ANNUAL FLOWERS FOR LATE DISTRICTS.

THE time has now arrived for the ordering of the different seeds for the garden, and as many amateurs, and not a few professional gardeners, are sometimes at a loss to know just what is likely to succeed in their districts, a few notes on annuals, hardy and half-hardy, may, I hope, be of service to some of the readers of this journal who are in any doubt on the subject. My notes are based on an experience of seventeen years in one locality, so the information may be relied on. Several of the kinds mentioned are really perennials, but invariably give the best results when treated as annual plants.

Antirrhinums.—Few plants have come more to the front for bedding purposes during the last six or seven years than the homely Snapdragons. That they have been wonderfully improved goes without saying. While all sections are useful in their way, I much prefer the intermediate, as they flower profusely and are less formal than the dwarf kinds, while they require no staking. The shades of colour are now so varied that all tastes may well be satisfied. Particularly good are Barr's Queen of the North (white), Barr's Yellow, Barr's Scarlet, Sutton's Deep Crimson, Sutton's Fire King, Sutton's Carmine Pink and Sutton's Bright Crimson. Sow the seeds in heat about the end of February.

Nemesias.—I have grown these gorgeous flowers for about fifteen years, and consider them the finest of all dwarf annuals. They succeed in all kinds of seasons, and in this district, at all events, no other plant can give such a display in beds or borders. The large-flowered, or SUTTONI section, is the more brilliant, but Sutton's dwarf hybrids are much preferred for bedding, as the plants are more floriferous and branch out beautifully. Many fail with these fine flowers by sowing too early and in too high a temperature. Give only very moderate heat to germinate the seeds; never more than 60°. The seedlings are rather tender at first, but as soon as they are pricked off they manage to gain strength.

Dimorphotheca aurantiaca.—I have grown this for three successive seasons, and it gives a very fine display. Sow the seeds during the first half of March and treat just like China Asters.

Double-flowered Pot Marigold.—This I find gives a great display in large beds. Treated like a half-hardy annual, the blooms are much larger and more double. Sutton's Orange King is very fine.

Stocks.—The East Lothian Stocks, if sown in heat not later than the middle of February, give much more satisfaction than the Ten-week kinds. Forbes' or Methven's strains are probably the best to be had anywhere.

Mimulus.—Sutton's Giant Mimulus, treated as a half-hardy annual, gives a wonderful display on a damp north border. Sow in March and treat just like Asters.

Nigella.—A grand hardy annual, the variety Miss Jekyll being the best, both as regards size and colour. It is best sown thinly during the last half of April where it is to bloom.

Candytuft.—The large white Spiral Candytuft makes a very fine bed, and blooms for a much longer season than the older varieties.

Lupines.—Sutton's atrococcineus is by far the best of the annual Lupines here. Sow where they are to flower towards the end of April. Thin out well.

Shirley Poppy.—A good strain—we grow Barr's—makes a very effective bed and blooms for a long season.

Nemophila.—This homely little annual flower is much admired when sown in a large mass. Must be well thinned while still in a small state.

Eschscholtzia.—One of the best flowers for dinner-table decoration in small vases if picked when only half open. Carter's Carmine King and The Mikado are fine, as is Mandarin. Sow on poor soil.

Mignonette.—Barr's Covent Garden Favourite is a giant Mignonette with a delicious scent. It blooms for a long period if sown on good soil in which some lime rubbish has been mixed. Thin to 9 inches apart.

Malope.—This annual is very effective in large beds or as clumps, and is excellent for cutting.

It is a mistake to sow hardy annuals too early in late, cold gardens, as slugs do so much harm when growth is slow. The last half of April and the first week in May I have proved to be best suited for this locality.

Preston House, Linlithgow. C. BLAIR.

NEW CARNATIONS.

The following Carnations were registered by the Perpetual Flowering Carnation Society from January 1 to December 31, 1911, and the raisers' names (colours and descriptions as received from the raisers) are given: Afonwen, seedling, pink ground overlaid with mauve; W. J. Smith. Atmah, seedling, salmon red; C. Engelmann. British Triumph, seedling, brilliant crimson; C. Engelmann. (This variety was originally registered as Triumph, but as it has since transpired that the name was already appropriated in America, the variety has been re-registered as British Triumph.) Cheltonia, seedling, red; Young and Co. Constance, seedling, white, very heavily lined with pink; Bertie E. Bell. Coronation, seedling, soft light pink; Bertie E. Bell. Fairmount, origin, California, heliotrope; Allwood Brothers. Frank Godding, seedling, deep cerise; F. W. Godding. Hon. Lady Audley Neeld, seedling, rich carmine with white margin; Young and Co. Judith, seedling, pure white; Bertie E. Bell. La Rayonnante, origin, France, yellow; Allwood Brothers. Lady Fuller, seedling, warm salmon; Charles Wall. Lady Northcliffe, seedling, clear salmon pink; C. Engelmann. (This variety was originally registered Ar, which name is herewith cancelled.) Mandarin, seedling, orange yellow, marked cerise pink; H. Burnett. Mrs. F. C. Raphael, seedling, cherry red; H. Burnett. Mrs. F. C. Harwood, seedling, purple; F. C. Harwood. Mrs. Greswolde Williams, seedling, pink on opening, develops to a soft mauve; Young and Co. My Favourite, seedling, clear shade of old rose pink; Stuart Low and Co. Pluto, seedling, brilliant velvety crimson; H. Burnett. Princess, seedling, pure glistening white, lightly striped pink; C. Wall. Queen, seedling, yellow ground, light pink markings; Young and Co. Queen Mary, seedling, pale pink; A. Smith. Salmon Britannia, sport, salmon pink; W. H. Page. Sultan, seedling, crimson; H. Burnett. Sunstar, seedling, deep yellow, with few pink stripes; C. Engelmann. Una Wallace, seedling, bright cerise; W. E.

Wallace. White Chief, seedling, white; H. Burnett. Wivelsfield Wonder, origin, America, white, marked delicate rose pink at edge of petals. Allwood Brothers. Correspondence regarding registration of varieties should be addressed to the secretary to the floral committee, Mr. Hayward Mathias, Lucerne, Stubbington, Fareham, Hants, and correspondence regarding membership and shows to Mr. E. F. Hawes, Ulysses, Fortune Green, London, N.W.

THE APPEAL OF GARDENING.

OF all pursuits under the sun, gardening must be the most absorbing and the most catholic for all who put their backs and brains into it. Why? I am going in for Tulips, and I want to know just a little about them. Well may flowers smile! The Pied Piper of Hamelin town smiled because he knew his power. Is it thus with flowers? I wonder! I only know that to grow good Tulips I have to know all about soils and manures; to keep them in robust health I have to learn a lot about certain low-born plants that will come and live on my favourites if they get half a chance; to take anything like an intelligent interest in their past I must, by way of a start, master Dutch and Turkish; to know how to group them in my garden or to describe them in THE GARDEN I am called upon to be a second Rubens; and so on *ad infinitum*.

Again, I have a fancy to take up the history of gardening or gardens. I get together many old books, Johnson, Parkinson, Gerard, Holland's Pliny; but I very soon find that garden history outcatholics Vincentius with his "quod ubique, quod semper, quod ab omnibus."

At all times! It goes beyond time. We go from Wilton, Versailles, Theobalds, Nonesuch, to the hanging gardens of Babylon, and beyond them again to the Elysian Fields and the gardens of the Hesperides and Adonis.

Everywhere! I should think so. "Mrs. Wigg's Cabbage Patch," "Mary's Meadow," Chambers' Chinese Pagoda at Kew, the Dutch garden here and the Italian garden there, the moraine at Wisley, the English garden in France, the Fuchsia and the Geranium in the cottage window, the Orchid in the palace. Truly ubique! Gardening, indeed, is like Nature; it abhors a vacuum.

By all—yes indeed, as they say in Wales.

Read such a charming book as "The Praise of Gardens," by Albert F. Sieveking, to learn of the past. And for the present have we not genetic conferences and Gooseberry shows: Children still sowing Mustard and Cress on wet flannel, and learned men experimenting with carbon dioxide and trying to fathom the mysteries and the mixtures of hybridisation? Magnificent libraries being collected, like Miss Willmott's and Arthur Paul's, or, on a still larger scale, those of Boston and Paris? Old-time florists like Bentley and Horner, and would I could still write James Douglas? Modern Orchid kings like Colman, Holford and Gurney Fowler? A National Rose show side by side with a National vegetable show? Great hybridisers like Eckford and Engleheart? Great scientists like Bateson, Hall and Elwes? Garden artists like Miss Jekyll and William Robinson? Splendid cultivators like Moore, Beckett, Gibson and Hudson? Huge commercial establishments like those of Sutton,

Veitch and Vilmorin? Daring travellers like Forrest and Wilson? Famous writers who, being dead, still speak, like Baltet and Burbidge? Magnificent organisers like Wilks and Theodore van Waveren? Specialists in every branch, Dykes and Iris, Bowles and Crocus, Harman Payne and books, O'Brien and Orchids, Barr and Daffodils, Bunyard and Apples, Ellacombe and flower-lore, Druery and Ferns, Douglas and Auriculas, Hill and Carnations and, literally, hundreds of other workers of less or greater fame and success? "Some born to blush unseen," potential and possible Mendels. Who knows? Others "si monumentum queris, circumspice." You can see their work. Great patrons and humble toilers, for

There's not a pair of legs so thin, there's not a head so thick,
There's not a hand so weak and white, nor yet a heart so sick,
But it can find some needful job that's crying to be done,
For the Glory of the Garden glorifieth every one.

And some can pot begonias and some can bud a rose
And some are hardly fit to trust with anything that grows,
But they can roll and trim the lawns and sift the sand or loam,
For the Glory of the Garden occupieth all who come.
—R. KIPLING.

Rightfully may gardening be called catholic. No King of Spain can gainsay the appropriateness of this appellation.

Postscript.—Like in many a letter, here comes the point. As far as gardening is concerned, I do not think we can, any of us, be too catholic in our sympathies, although, if it is not our bread and butter, some may become too much absorbed in its pursuit.

I have lately been down some of the out-of-the-way bypaths and in the almost unknown regions of the great world of horticulture. I have found the Barometz and seen the Goose Tree (at least in a picture). I have read the immortal Philip Miller's very own handwriting. I have handled rare old books on flowers and fruits. I have studied the Tulip. And now, with the kind permission of the Editor, I am going to try to touch a responsive chord in readers' hearts and to give them possibly an added interest in this ancient art. In the course of the next few weeks I propose to draw the curtain partly aside and tell of what I have seen and found.

The historical side of horticulture and the quaint ideas of the past may not possess any great intrinsic value in themselves, and may only appeal to dreamers of dreams; but, all the same, they have the power of giving infinite pleasure and enjoyment to all who hear and follow the call. The sleep of winter is over our gardens. Some of us have no glass-houses full of Flora's gems, but we all have an arm-chair, and in that we can sit and read books, large and small, old and new, that transport us to a nearer or remoter past and enable us to picture the days of yore.

Flora, her jewels doth expose:

 bids you pick and choose;

 Come boldly on and your collection make,

 'Tis a free gift, pray wear them for her sake.

—From the *Mind of the Poetess* in "Ray's Flora," 1665.

JOSEPH JACOB.

"My Garden Diary for 1912."—This is the title given to a dainty booklet sent out by Messrs. Sutton and Sons. It is bound in stiff coloured paper covers, and contains a calendar with reminders on garden work for each month and ample space for memoranda. This is a delightful little diary that is both artistic and useful.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PRIMROSES FAILING (H.).—You had better leave your Primroses alone at the present time. It is quite probable they will improve in health as the days get longer, whereas if you disturb them now it may do them harm. May is a good time to sow Primrose seeds out of doors. Transplant your Primroses as soon as they have flowered.

ABOUT POLYGONUM BALDSCHUANICUM (T. J.).—Polygonum baldschuanicum is a hardy climber from Bokhara. It grows at least 20 feet high, and is suitable for planting at the foot of a bush or low tree, such as a Holly or Pine, over which it may ramble at will. Loamy soil is suitable, and, after it is once established, all the attention required is to see that the main branches grow in the right direction, and prune away the dead ends of the branches in spring. There is no necessity to cover it in winter, in the Southern Counties at any rate. A south, east or west aspect suits it, south and west perhaps being the most desirable. It blooms freely during summer, the flowers being white.

ROSE GARDEN.

RAMBLER ROSES WITH SHOWY CLUSTERS OF BLOSSOM (J. C. H.).—Four good kinds, different from those you possess, would be Mrs. F. W. Flight, American Pillar, Excelsa and Newport Fairy.

ROSES FOR TRELLIS (E. T.).—Twelve good varieties would be American Pillar, Excelsa, Edmond Prout, Alberic Barbier, Hiawatha, Dorothy Perkins, Ruby Queen, René André, Evergreen Gem, Gardania, Lady Godiva and Leontine Gervais.

FREE-FLOWERING RAMBLER ROSES (J. C. H.).—Good additions to those you already possess would be Lady Godiva, Minnehaha and Excelsa. Three good well-formed Hybrid Teas of a yellow or cream shade are Joseph Hill, Melanie Souper and Mrs. Aaron Ward.

ROSE REINE MARIE HENRIETTE (B. D. G.).—This beautiful old Rose, sometimes known as the red Gloire de Dijon, succeeds best away from a wall or fence. Grow it well out in the open over an arch or up a pillar, or even as a free bush without any support, a form of growth well suited to many of the climbing Tea and Hybrid Tea Roses. It has a great tendency to mildew, so that by planting upon a wall or fence this is aggravated. A good Rose for your tarred fence with north-east aspect would be Aimée Vibert or Zepherin Drouhin or Conrad E. Meyer, only you must take care to secure the growths well so that they do not lacerate each other by swaying about in the wind.

FRUIT GARDEN.

PEACH AND NECTARINE TREES ON THE BACK WALL OF A VINERY (P. E. M.).—The Peach and Nectarine trees to grow there successfully require as much sunshine and light as does the Vine. They would do no good whatever on the back wall of a vinery under the shade of the Vines. You would do better with Figs. They can be made to bear fair crops under such conditions.

CORDON APPLES (J. G. W.).—Seeing that your soil is good, there is no reason why cordon Apple trees on the Paradise stock should not succeed well in such a position. Pears and Plums would, no doubt, be more at home there, but we should have no fear of Apples not doing well so long as the right sorts were planted and watering was attended to in dry weather. They would be none too near the building at 12 inches, and we should prefer a timber trellis to tie them to rather than galvanised wire. Take away a little of the old surface soil from over the roots of the trees, replace it with fresh loam, after mixing a small quantity of bone-meal with it (say, a handful to a peck of soil), place a dressing of decayed manure over the surface soil 3 inches deep as far as the roots extend, leaving it on until the end of April, and then give another fresh dressing for the summer months. This will conserve the heat and moisture and encourage the growth of surface roots.

PEACH SEA EAGLE (W. M., Germany).—The tree of this variety is very hardy. It is also a robust grower and a regular and good cropper. The fruit is large, of a pale lemon green colour, with minute red spots. Its flesh is of a pale green colour, flushed with red near the stone. Its flavour is only second-rate. It is valued chiefly in this country for its hardiness and its heavy cropping qualities, and also for its large size. It is a favourite with market-growers, and is largely grown out of doors on south walls in many parts of England. The variety is a late one.

APPLE TREE FOR AN EAST WALL (M. B.).—The aspect, of course, is not a good one, although it is slightly east by south. For an October Apple we think King of the Pippins is excellent. The tree is of strong constitution, a good healthy grower and a fairly constant bearer. The fruit is handsome and of good quality. Cox's Orange Pippin is a better-flavoured variety and ripe about the same time, but it is very subject to canker, and would be disappointing in the position. If you prefer a later Apple, say, ripe at Christmas, Hibberd's Pearmain is one of the best. The trees should be on the Paradise stock.

KEEPING APPLES AND PEARS (J. G. W.).—If you can devote one end of the galvanised shed to the storing of your fruit it will answer very well. You will have to thatch the roof and the sides with Ling (Heather) or Rye straw thatch quite 1 foot thick, and also that portion which may be exposed inside the shed. There must be means of ventilation when the weather is warm. This could be stuffed up with straw in cold weather. You would find that this thatch would keep the place cool in summer as well as warm in winter. A temperature during winter of from 42° to 46° Fahr. should be aimed at, but the fruit will receive no harm if the temperature for a short time falls a degree or two below 40° occasionally.

PLUM TREES NOT BEARING (M. C.).—If your trees are healthy and have made a free growth, the best thing for you to do will be to take these up and replant, adding a liberal quantity of new turfy loam to the soil, cut back all the strongest of the roots by one-half their length, and also cut off the top ends of the other roots. Let the cut be slightly slanting, and on the top side of the root. This will result in a multitude of small, fibrous surface roots being formed, and which in turn in due time will help to produce fruit-bearing branches. On the other hand, if the trees are weak and sickly, the best way will be to grub them up and plant others. Should you root-prune the trees as suggested, do not replant the trees too deep. The top roots should not be more than 5 inches below the surface. Tread the soil very firm after planting, and give the surface of the soil over the roots a dressing of well-decayed farmyard manure 3 inches deep. The swelling of the stem as indicated in the sketch you send is the result of grafting scion and stock, and is of no consequence.

THE GREENHOUSE.

HYDRANGEAS IN POTS (S. E.).—Hydrangeas in pots, whether young or old, should be given enough water to keep the soil moist. Of course, they do not require anything like the amount they do during the growing season, but at no time must the soil become parched. Provided the plants are well shaped, they will not need cutting back, as by so doing you run a considerable risk of a lessened flower display. Still, if the plants are crowded, a few of the weaker shoots may be thinned out before the plants start into growth in the spring.

GREENHOUSE CLIMBERS (Miss C. C.).—If you exclude Clematis indivisa there are very few kinds of Clematis which are suitable for your conservatory, and other kinds of climbers would doubtless give greater satisfaction. You might, however, try C. meyeniana and C. lanuginosa varieties Fairy Queen and Lady Caroline Neville. Passiflora Munroi and P. racemosa would probably give satisfaction as far as Passion Flowers are concerned. The former is the stronger grower; the latter requires the warmer position. We should, however, advise you to try the following four climbers: Passiflora racemosa, Lonicera sempervirens, Rhodochiton volubile and Bougainvillea glabra var. sandariana. The Passiflora requires the warmest position, and your temperature may be too low for it.

CYCLAMEN AND GRUBS (Mrs. C.).—The grubs which have eaten the roots of your Cyclamen, and are now in some cases attacking the corns, are the larvae of one of the many weevils which are, as a class, so destructive to vegetation. The perfect beetles feed on the leaves of many species of plants, and being nocturnal feeders, they are often overlooked until they have done a considerable amount of damage. These beetles lay their eggs in the surface soil of pot plants, and, when these eggs hatch, the future beetle makes its appearance in the shape of a small whitish grub. It is very voracious, and quickly commences to feed upon anything ready to hand. The grub quickly increases in size, and, consequently, in destructive powers. To check the trouble the perfect insects must be caught, and that is not altogether an easy matter, as not only do they feed at night, but they also drop suddenly to the ground when surprised by a bright light or by the shaking of the plant upon which they are feeding. It is, therefore, a good plan to place a white sheet, or paper of that tint, underneath the plants, so that when they drop they can readily be detected and killed. As the eggs may be in the potting compost, it should be sterilised before using, or fresh soil from quite a different source should be obtained. In any case, the damage seems to be too great to expect many flowers this season.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Pelargoniums in the Open in January.—As evidence of the remarkable mildness of the present winter, it is worth recording that on Sunday, the 14th inst., plants of ordinary bedding Zonal Pelargoniums were noticed in a window-box in an Essex garden. These were only sheltered from cold winds and had not been given any protection from frost. The plants were quite healthy and making a number of new growths.

Plant-growing with the Cooper-Hewett Lamp.—The experiments carried on by Miss E. C. Dudgeon at Lincluden House, Dumfries, in the growth of plants by the aid of the Cooper-Hewett Mercury Lamp, a report of which appeared in the last issue of the Journal of the Royal Horticultural Society from the pen of Professor Priestley, are being continued this winter. At the request of Miss Dudgeon, the Dumfriesshire and Galloway Natural History, &c., Society appointed two of the members of their council—Mr. S. Arnott, F.R.H.S., and Dr. J. W. Martin, M.D.—to visit the experimental station and to check the records periodically.

One Thousand Pounds for Sweet Peas.—This year the munificent sum of £1,000 is being offered in cash prizes for Sweet Peas by Mr. Eckford, the well-known Sweet Pea specialist. The amount is divided over five classes. The scheme caters for the cottager as well as the amateur employing one or more gardeners. One class is open to professional gardeners, and another to boys or girls under sixteen years of age. All entries must be posted to Wem on June 26, 1912. Full particulars of this great competition may be had from Mr. Henry Eckford, Wem, Shropshire.

Water Gardens in January.—Anyone possessing a water garden, Lily pond or Lily tank, whether it be large or small, would do well to remember that the present is a good time to clean it out and overhaul the plants in preparation for the season of growth. The smaller the pond or tank, the more need is there for attention, and everything in the way of mud and weeds should be removed. Plants which have become too large for their places may be carefully divided, taking care in the case of Water Lilies to retain one or more strong crowns for each clump. The opportunity may be taken of giving fresh soil. Turfy loam is the most suitable material, but it may have a little well-rotted manure mixed with it. Either build the soil into mounds, which may be kept in position by a surrounding layer of whole turves, or place it in baskets. Replant as soon as possible, and do not allow the water to remain out of the pond any longer than is absolutely necessary.

Thalictrum dipterocarpum.—During recent years numerous subjects have been introduced from China, but few will become more popular than this attractive species. It is the finest of all Thalictrums, the inflorescence attaining a height of 4 feet or 5 feet, and the general habit is extremely graceful. The individual flowers are rose purple in colour, with many citron yellow anthers, and when grown in a mass or even in clumps it looks very attractive on account of its elegant growth. It is also useful for decorative purposes in the dwelling-house, because it will remain in perfection for several days in a cut state. Seed is now offered, which should be sown directly it is received in a well-drained pan of light soil and kept in a cold frame till the seedlings are sufficiently large to plant out in the open border. An open, sunny position should be chosen, but a rich soil is not recommended.

An Interesting Japanese Tree.—Anyone seeing *Cryptomeria japonica elegans* for the first time in midwinter, and then not again until summer, might be excused if he thought that he had seen two distinct trees, for summer and winter conditions differ to a remarkable degree. In summer the plumose branches are covered with pale green leaves, whereas by winter the foliage has turned to a deep bronze or purple. This change comes about gradually, commencing during early autumn, and as spring arrives the colour changes back to green. In whichever condition the tree is noted, it claims attention as a likely decorative subject. It has a fault, which is rather a serious one, for it is liable to be blown about badly by wind. When planting it is advisable, therefore, to give it a well-sheltered place. It is a variety of the common Japanese Cedar, which is one of the most important of Japanese timber trees.

The Butcher's Broom Fruiting.—On several occasions of late, examples of *Ruscus aculeatus*, commonly called the Butcher's Broom, have been seen covered with bright red fruits and making a more effective display than some of our choicer fruiting shrubs. It is unfortunate that fruiting plants are not more often found in gardens, for it is a common complaint that plants under cultivation bear fruit less satisfactorily than wild ones. The reason for this is probably that the plants have been increased by division, and have all, in a certain garden, or perhaps district, sprung from one original plant. This would mean that all were either male or female plants. When this is ascertained to be a fact, the introduction of a few specimens of the opposite sex would doubtless result in the plants fruiting as freely as they do in a state of Nature. The fact of the Butcher's Broom being able to exist and thrive in shady places, together with its showy character when in fruit, warrants anyone going to a little trouble to secure both sexes.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The National Rose Society and Amateurs.—I quite agree with "W. M." that every inducement should be given to new members to become competitors at the shows. I should like to see classes similar to those at the Botanic Show (for new members and beginners) at the provincial and autumn shows. Much has been said against Roses shown in boxes, but we find that visitors "go for" these first and the so-called garden Roses last.—G. S.

The Variegated Rock Cress.—Is there not some confusion in describing the yellow variegated form of *Arabis* as *albida*? The forms of the true *albida* are known by their rough tomentose or hairy foliage, and I know of no yellow variegated form of it. The variegated variety, which has yellow-edged leafage and is common in gardens as *Arabis lucida variegata*, is a native of Hungary, whereas *albida* comes from the Caucasus. *Lucida* is much dwarfer and more compact in habit, has glaucous, shiny leafage, and cannot be confounded with *albida*. The typical form of *lucida* is seldom seen. The yellow-edged form makes a good summer edging plant, but it does not appreciate disturbance.—A. D.

Euphorbia Wulfenii.—I was most interested to read Miss Jekyll's note on *Euphorbia Wulfenii*. I had noticed in a clump of this plant here that the point of every shoot was crooked downwards last autumn, and was at a loss to account for this, for, so far, I have not flowered this plant, so had not the opportunity to note this characteristic. It is a pleasure to anticipate the flowering of this *Euphorbia* after some years of disappointment. These plants are in a high position at the back of the rockery, and were supplied in the autumn of 1906 from Munstead Wood to Lady Northbrook. They now form a fine clump fully eight feet through and over three feet high. Of a certainty it shows that this plant requires a thorough scorching before it will flower. We have another clump of smaller plants that are in a moister position with a western aspect. They have been in their present position two years. These also have every shoot crooked.—E. HENDERSON, *The Gardens, Stratton, Micheldever.*

— I was greatly interested in Miss Jekyll's note upon this beautiful plant. The oldest specimen growing in the botanic garden here promises to be a grand sight during the coming spring. I have not, however, suffered the disappointments with it which Miss Jekyll has experienced, as every year during the past seven it has borne flowers in considerable numbers, with the exception of last spring. Now, however, many shoots, which in the ordinary way would not have bloomed until another year, are showing flower, and altogether there must be quite 150 shoots all promising to flower. This is a plant which is well worth growing, even if it never flowered, for its handsome foliage and stately appearance. I have plants in full sun and in shade, and they do equally well in both places. They seed freely, and young seedlings quickly develop into good specimens. One I planted a year last autumn is now showing from thirty to forty flowers. I invariably cut away a proportion of the old flowering shoots each year. This keeps the plant shapely and ensures a plentiful supply of young shoots from the base.—J. D. HALLIBURTON, *Victoria Park, Bath.*

Spring Cabbage.—It is not often one has the unusual experience of cutting the first spring Cabbage on January 1. This was our experience this year. Seeds of Ellam's Early Dwarf were sown about the middle of August, the first Cabbage being cut on January 1. The heads were of fair size and of splendid quality.—H. R.

Evergreens for Town Gardens.—Your correspondent J. C. Wadd deals so exhaustively with this subject in *THE GARDEN* for December 30, 1911, as to leave but little to be said on the matter. Some of the plants named I, however, could not keep alive in London, where in an orthodox back garden, or glorified courtyard, I in the course of years tried a great number of different shrubs. Those of a deciduous nature gave one a considerable choice, but the difficulty was with the evergreens. Of these the first place must be given to two Japanese shrubs, namely, *Aucuba japonica* and *Fatsia japonica*, known more generally as *Aralia Sieboldii*. The *Fatsias*, which had really become too tall for indoor decoration, were planted out, and now after six years they form a really striking feature and have flowered freely. The stout, leathery nature of their leaves enables them to resist the sulphur-laden fumes of London better than anything else except the *Aucubas*. Green-leaved *Hollies* do fairly well, the Golden *Privet* loses its leaves early, the Japanese *Euonymus* is eaten up with caterpillars, the *Laurel* looks miserable, and so do the evergreen *Barberries*. The small *Periwinkle* grows freely, but the large one quickly dies out. A deciduous shrub that will thrive right in the heart of London and is well worth growing for its handsome leafage is the *Fig*, which is not mentioned by your correspondent.—H. P.

The Royal Horticultural Society's Daffodil Show.—The amended schedule has now been published, and is to be obtained on application to the Secretary, Vincent Square, Westminster. Everyone who intends to compete should send for a copy. The meaning of "in commerce" is defined. A very necessary proviso has been added, viz., that all flowers shown for competition "must have been actually grown by the exhibitor." The regulation about naming has been watered down. Staging arrangements have been incorporated with the "Regulations," and competitors are required to select the section in which they will enter and confine their entries to that one only. With these alterations and additions I think this second edition will commend itself to everyone; and although minor improvements might be suggested, on its broad main lines it should be found to be a good workable schedule. I must, however, say that I regret that there is no limitation of prices in Section 3, which is intended for small amateurs. "Agricola," who says he writes from an amateur's point of view, calls this, in last week's issue of *THE GARDEN*, "a ridiculous plan"; but when a man has "hundreds of seedlings" (many presumably good enough for showing), he certainly should be debarred from trying to sweep the board in the small men's section. From all I have heard I do not think there are many amateurs or traders who would agree with him. He obviously writes from the standpoint of an old hand with plenty of seedlings. Such can take care of themselves. The man most of us want to encourage is the beginner with very likely a slender purse, and who a short time back had neither seedlings nor varieties. We have now a good schedule; let us hope we will have a good show. Please note the date—April 16 and 17.—JOSEPH JACOB.

Hares Eating Trees and Carnations.—Can you or any of your readers suggest some method of preventing hares from eating Apple trees, Carnations and Rose trees, as they have made great havoc among mine? The greater part of my garden is wire-netted, but some of it is impossible to wire. I can find no remedy, and many of my trees are destroyed.—C. R. L.

The Winter Jasmine.—I saw in *THE GARDEN* for January 6 some notes on the winter-flowering *Jasminum nudiflorum*. I notice how beautifully it is flowering on the walls of the cottages, but the cottager will persist in pruning the *Jasminum* with the shears. Now, I think this is a great mistake, as it spoils the natural habit and beauty of the plant. If left unpruned it makes a brave show at this season of the year, and is so useful, its long yellow sprays of flowers being excellent for table and decorative purposes.—WILLIAM DRIVER, *Stonehouse, Gloucestershire.*

A Proposed Rose Conference.—As there are likely to be a large number of foreign rosarians visiting the International Horticultural Exhibition in May next, would it not be a suitable opportunity to have a conference under the auspices of the National Rose Society? for surely this society is more fitted to conduct such a conference than the Royal Horticultural Society. If this suggestion meets with the approval of rosarians, it is not too soon to be thinking about the details and inviting our brother Rose-growers from other countries to prepare papers for discussion.—WALTER EASLEA, *Eastwood, Essex.*

Hydrangea paniculata.—A fact not generally recognised is that this *Hydrangea*, so well shown on page 5 of *THE GARDEN*, is difficult to obtain from nurseries. Its variety *grandiflora* may be bought by the thousand, but the typical *H. paniculata* is, as a rule, ignored. While the variety *grandiflora* is not likely to be dethroned from its position as a desirable subject for pot culture, the typical kind makes the most attractive bed, at least from my point of view. The lover of huge flower-heads will still vote for *grandiflora*, from which the typical kind differs in being more vigorous in growth, while the leafage is denser and of a deeper green. The most important feature, however, is to be found in the inflorescence, as the flower-heads contain a number of fertile blossoms, over which the large, showy, sterile ones are plentifully scattered.—P.

Camellias as Outdoor Shrubs.—I have for many years been much interested in the cultivation of *Camellias* as shrubs and wall plants in the open air, and was pleased to see the article by Mr. W. A. Cook in your issue of January 6, page 3. Your correspondent says that the single Japanese variety, *C. Sasanqua Mikiniki*, flowered freely at the end of November. I recently saw some beautiful bushes of this section loaded with buds, but they would not open before February. In a Hampshire garden there are some magnificent specimens growing in the form of bushes on a lawn sloping to the south, with a protection on the north and east afforded by an old ruin and some conifers. These *Camellias* are from 12 feet to 15 feet high, in a most healthy state, and flower freely. The soil is gravel, sand and peaty loam. In another part of the same county I had charge of many plants growing on north walls. They flowered freely and escaped injury by frost in some seasons, but were discoloured in others. In one place—against a north wall—always in shade and very gloomy, the plants did well, but never flowered.—B.

A Plague of Ants.—We have been pestered here with a species of ant which is probably of foreign origin, and which, no doubt, is brought into this country with importations of plants and other things. Their habits are quite unlike the kinds usually found in this country, and when once they get established they are very troublesome and exceedingly difficult to get rid of. They breed at a very rapid rate, which necessitates their finding fresh places for the new queens to establish their nests. In this manner they will quickly take possession of the whole place if they are not checked. They are very objectionable indeed in dwelling-houses, where they will attack all kinds of foodstuffs. We tried all the methods usually adopted for destroying ants without making the slightest impression, when we were recommended to try the Ballikinrain Ant Destroyer. This we have used with excellent results, and the pest is now practically cleared. I have been tempted to pen this note for the benefit of other readers of THE GARDEN who may be troubled with this pest.—E. HARRISS, *Royal Gardens, Windsor*

Planting Apple Trees.—The oft-repeated advice to plant Apples, or, in fact, all fruit trees at the same depth as they have been growing in the nursery is, in the majority of cases, the right course to follow. I do not believe in shallow planting—that is, leaving some of the largest top roots barely covered—even in wet situations. It is much better to drain the land and plant at a moderate depth. In dry soils and climates it is all the more important to induce deep rooting. I am aware that there may be a danger of the roots reaching down to an unsuitable subsoil if the sites have not been specially prepared; nevertheless, it pays to prepare a good depth of soil suitable for the tree before planting. This may be done by digging out the stations some time beforehand and either removing the subsoil altogether or, if it is practicable, adding some of the top soil with mortar rubbish, charcoal, burnt clay or garden refuse, mixing all together and allowing it to lie exposed until the time for planting. By this means a suitable rooting medium is secured for Apples on the Paradise stock. Trees on the Crab or free stock, which produce strong, downward roots, must have a greater depth of soil than is needed for those on the Paradise stock.—COLIN RUSË, *Rush, County Dublin*.

The Paris Wallflower.—Why is it one never hears of this kind of Wallflower being grown in England? It certainly cannot be because it is unworthy, and being so well known on the Continent it goes without comment; nor can it be that there are so many winter-flowering subjects, for there is always room for a Wallflower in the spring, and therefore there must be room earlier in the year. In many gardens this variety should prove a welcome and valuable addition. When living in Cape Colony, this was the only Wallflower that would flower. It was grown as an annual,

flowering within four months of seed-sowing, the seed always having been obtained annually from France. The plant under notice begins to bloom during the late summer from seeds sown in March or April in gentle heat, and continues to do so throughout the autumn and winter, and during such mild weather is beautiful and delightfully fragrant.—H. R., *Twickel, Holland*.

Camellia japonica magnoliæflora.—Undoubtedly this Camellia ranks among the best of the semi-double varieties raised during recent years, and when it becomes better known cannot fail to find a place with lovers of these old-fashioned plants. The flowers when opening are of a delicate pale rose colour, but with age become almost white. The petals, which number from twelve to fifteen, are narrow and more erect than in any other Camellia, this character in a fully-expanded flower



THE NEW MAGNOLIA-FLOWERED CAMELLIA: C. MAGNOLIÆFLORA.

giving it the resemblance of Magnolia conspicua. This Camellia is now flowering in the Temperate House at Kew; the plant is about 4 feet high, on which there are between thirty and forty expanded flowers and buds. It was obtained as a small plant some five years ago from the well-known nursery of Mr. T. Smith of Newry.—W. T.

FORTHCOMING EVENTS.

January 23.—Royal Horticultural Society's Exhibition at Vincent Square. Lecture at 3 p.m. by Mr. H. Morgan Veitch on "Horticulture and the Proposed Taxation of Land Values."

January 24.—Royal Botanic Society of London Meeting.

January 25.—Manchester Orchid Society's Meeting.

THE ROSE GARDEN.

THE BEST ROSES FOR TOWN GARDENS.

WITH the advent of a more sturdy race of Roses, which distinguishes our present-day Hybrid Teas, the town-dweller need have no tears as to the practicability of growing some good Roses even within the sound of Bow Bells. The publication of gardening papers like THE GARDEN has so educated the enthusiast in the matter of soil preparation that one of the stumbling-blocks has been removed from his path.

Preparation of the Soil.—It is all right when the amateur takes the work in hand for himself; but when left to the mercy of the average jobbing gardener he can always be purchasing plants. Recently I had occasion to plant some standard Roses in one of the villa gardens that are to be found all around London, and although the soil was excellent, the Roses had been a failure every year. I could see at a glance what was wrong, for in the same street there were Roses flourishing most wonderfully. On removing the old trees I found just a big basin of good soil, and beneath an almost rock-like condition of the soil, so much so that a pickaxe had to be brought into requisition. If the busy amateur would but see that for every standard or bush planted the lower soil were well broken up, Roses would flourish far better, even though near the smoke. Holes at least 2 feet each way and 2½ feet to 3 feet deep should be dug out and good manure added before the soil is returned, and, if possible, let any poor-looking soil be replaced with some nice fibrous loam, although in nine cases out of ten the staple soil is good enough. Of course, the varieties selected must always be considered. It is courting failure to plant such Roses as Mrs. W. J. Grant, Liberty and Niphetos; but Roses of the type of Caroline Testout and Hugh Dickson flourish most luxuriantly if well looked

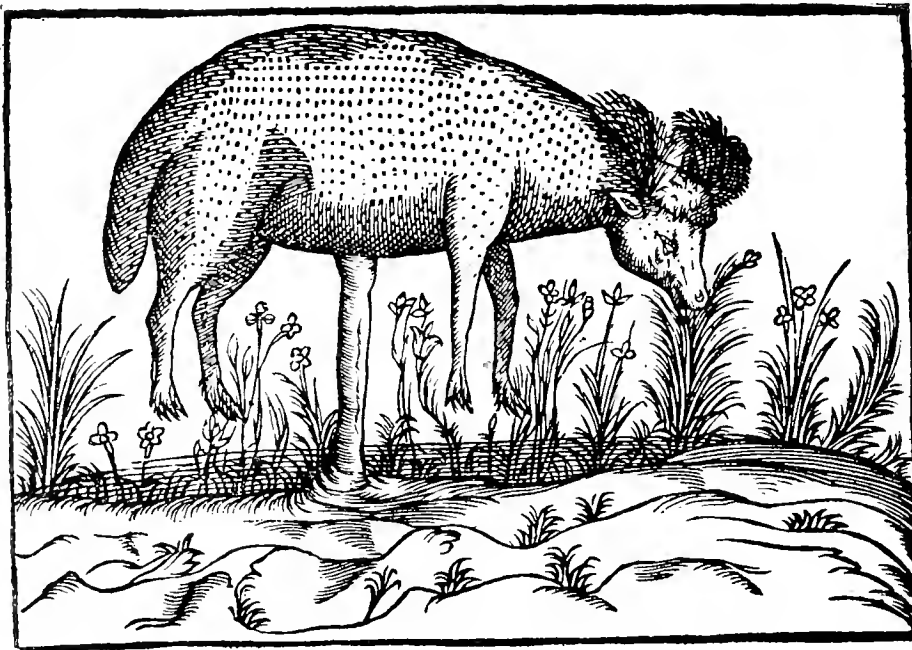
after. Roses with glistening foliage do so much better than those with rough-surfaced leaves, and for this reason I would strongly advise planting some of the true Teas and China Teas. February and March are two excellent months for planting providing that the weather is open and snow does not come; indeed, I would quite as readily plant then as in November.

The Best Town Roses are Caroline Testout, Dr. O'Donel Browne, Gustav Grunerwald, Hugh Dickson, La Tosca, Mme. Abel Chatenay, Mme. Jean Dupuy, G. Nabonnand, Peace, Mme. Isaac Pereire, Mme. Ravary, Mrs. Paul, Johanna Sebus, Lady Ursula, General Macarthur, Ulrich Brunner, Prince de Bulgarie, Mrs. A. R. Waddell, Lady Ashtown, Laurent Carle and Marie van Houtte. P.

RAISED BEDS FOR DECORATIVE ROSES.

This is no new idea, but its advantages are very evident, especially when the plants are grown upon the seedling Briar, the stock now most largely employed. The greater depth of soil provided is a consideration, but the elevation also encourages a warmer condition of the soil, a very important fact. In badly-drained soils the raising of the beds would to some degree compensate for the lack of drainage, because there are channels provided between the beds which would take away a quantity of surface water.

Last season I had occasion to make up a number of beds, and as I had a quantity of good soil I raised the beds fully 1 foot above the ordinary level of the surrounding land. It was all newly-worked land, and the alleys were depleted of some of their soil, which went towards the raising of the beds. The soil was allowed to lie some time



THE BAROMETZ OR VEGETABLE LAMB AS DEPICTED IN CLAUDE DURET'S BOOK.

until it was in a good, workable condition, and the Roses were planted in the beds quite late in April. Although such a dry summer followed, I had a glorious display from these beds. I should say that the plants were cut down nearly to their bases at the time of planting. This, in my opinion, should always be carried out with Roses planted in spring, excepting, of course, rambler and climbing Roses.

I know some growers advocate adding sand to heavy soil. This I believe to be quite unnecessary. The fact of the soil being elevated will be quite sufficient. Add some burnt earth, if it is available, but leave the sand severely alone. A Rose garden with raised beds would take away that squattiness which is sometimes apparent, and it would certainly tend to the freer growth and more complete ripening of the wood. Of course, no one would suggest raising beds where the soil is very light and porous; but in the majority of gardens the owners could well carry out the idea with advantage. P.

PLANT WONDERS OF BY-GONE DAYS.

THE BAROMETZ AND THE BARNACLE TREE.

EVEN by quoting such high authorities as that ancient traveller, Sir John Maundeville, who "did" a tour of the world between the years 1322 and 1356, and who on his return wrote, just as a modern would do, an account of his "Voilage and Travaile"; or that still more eminent seeker after knowledge, Pope Pius II., who visited Scotland in 1468, I fear I shall not be able to convince my readers of the existence of these two vegetable wonders.

But "please, sir, it's not our fault. We cannot help living in the twentieth century. It would have been quite 'all right' if this copy of THE GARDEN had been dated January 20, 1360." No

but never-to-be-found class of the vegetable kingdom, "Plantæ fabulosaë." Mr. Carnegie may sleep peaceably; there will be no battle royal for their possession, and not a single "wherry" need be built for their protection.

How came it that they were ever believed in? The interest of these two particular zoophytes (plant animals), as I believe the old technical term was, lies very largely in their history and their *raison d'être*. They belong to a totally different Order from most of the fabulous plants of antiquity, inasmuch as they were certainly possibilities if the data and the general knowledge of the times be taken into consideration. In other words, they were attempts at explaining undoubted facts.

The Barometz.—In the case of this wonder, when Sir John Maundeville left England in 1322 Cotton clothing of any description was only known from afar, and was so costly that only the very great ones of the world could afford to have it. The Cotton Plant still remained in its home in the East, and America was then undiscovered. Everyone, however, was familiar with wool and the source of wool, viz., the backs of sheep. So when Sir John in the course of his travels reached India, he would be told about the making of the fine muslins and calicoes, and he would be shown the Cotton Plant. The ripe fruit bursting and disclosing a substance that looked just like the wool with which he would be familiar at home, doubtless made it easy for him to believe what he was told about the "Melon" containing a little lamb, or else prompted him to make this explanation "on his own."

When he returned and published his book, he had a picture of the "marveyll" made and inserted. Now this illustration is curiously like in leaf and fruit one of the Cotton Plant (*Gossypium herbaceum*) published in Burnett's "Plantæ Utiliores." If only there was not the head of a little lamb peeping out from each pod, the likeness would be exact. There is no doubt that it is the Cotton Plant that is figured. Now Sir John knew that wool must come from sheep's backs. It never entered into his head that it could come from anywhere else. Therefore he said this fruit contains a little lamb, and so he had it pictured. And thus the Barometz came to life. An interesting exercise in plant-lore would be to trace the different stages in the growth of the mythical plant until it became in the popular mind like our illustration, which represents its highest development, and is taken from a rare French work by Claude Duret, published in 1605, and entitled "Histoire Admirable des Plantes et Herbes esmerucillables et miraculeuses en Nature."

Another would be to try to explain how the original Barometz (lamb), which was some kind of Fern that grew in Tartary and had, under certain conditions, a fancied resemblance to a lamb, got mixed up with the Lamb Tree of India, and eventually gave it its name. That it was so seems certain, else how could Erasmus Darwin write in his botanical poem, "The Loves of the Plants,"

Cradled in snow and fanned by Arctic Air
Shines, gentle Barometz! thy golden hair;
Rooted in earth, each cloven hoof descends
And round and round her flexile neck she bends;
Crops the gray coral-moss and hoary Thyme,
Or laps with rosy tongue the melting rime,
Eyes with mute tenderness her distant dam,
Or seems to bleat, a vegetable lamb.

—E. DARWIN, 1790.

one then would have doubted the existence "in the islands of the Orcades" or in "a small island in Lancashire, called the pile of Foulders" of "Trees that beren a Fruyt that becomen Briddes fleeynge" (Maundeville), or that in "a kingdom that men clepen Caldilhe: that is a fulle fair Contree, there growethe a maner of fruyt as though it waren Gowrdes; and when thei ben rype, men kutten hem a to and men fynden with inne, a lytylle Best, in flessche, in bon and blode, as though it were a lytylle Lomb with outen wolle. . . . Of that Frute I have eten; alle though it were wonderfulle: but that I knowe wel that God is marveyllous in His werkes."

Just imagine what an ordering of aeroplanes and what a rush there would have been between Lipton's and Lyons' on the one hand, and Bunyard's and Rivers' on the other, for that "fair Contree" beyond Cathay to secure such a prize. Perhaps it is as well that we now recognise both the Barometz (see above) and the Barnacle or Goose Tree (see page 33) as belonging to that most interesting

The Barnacle Tree is probably an older creation, and it has been alive in more recent times, or should I rather say half alive? It appears to have had a similar origin to that of the Barometz,

THE FLOWER GARDEN.

SWEET PEA NOTES.

Seed-Sowing.—In these days, when the smallest provincial societies have their keenly-contested classes for Sweet Peas, it is safe to assume that hundreds of thousands of seeds are sown in January. The most successful exhibitors, it is claimed, sow all their seeds in cold frames in the autumn; but I have noticed that they do not forget to make further sowings in the spring in order to maintain a long succession of perfect blooms. The precise date for sowing naturally

down at Sweet Pea culture who swear by 3-inch pots, and others who affirm with almost terrifying solemnity that no good can result unless 6-inch pots are used. Let growers consult their fancy and their convenience in this matter, and splendid success will reward their efforts, provided that all other points of culture have correct attention at the proper time. As far as compost for the seeds is concerned, all are agreed that the ideal is a mixture of fibrous loam and refuse manure, with coarse sand, and the proportion of the second-named will vary from one-third to one-half, and of the last-named from one-eighth to one-tenth, according to the nature of the loam. No effort must be spared

viz., the endeavour to explain facts with imperfect data and small knowledge. Numberless sea-birds were seen every year in parts of the West Coast of Scotland, the North of Ireland and the Orkneys, but no nesting-places or eggs were ever found. Whence came they then, or how? The clue seemed to be given when it was noticed that there were quantities of a "Tulip-shaped" shell either on the rocks or on bits of wood or trunks of trees wherever the birds were, and that every now and again something very like feathers (really the plumose cirrhi) protruded from them. Two and two were put together and the Barnacle Tree was born. The tree's existence was unquestioned, and it grew with the ages until, in its latest development (as in our illustration), the fruit that fell into the sea became fish, and those that fell on the land, birds. (C. Bauhin. De plantis a divis sanctive nomen habentibus. 1591.)

Although William Turner (*circa* 1550) had to consult an Irish priest, Octavianus, before he could make up his mind to insert the wonder in his book, and although Gerard (1597) was evidently very much perplexed as to whether he should admit it into his Herbal, there seems to have been a sneaking idea that there was something, after all, in it, which lasted for many years afterwards.

In 1707 Bishop William Fleetwood of St. Asaph collected a number of "Curiosities of Nature and Art in Husbandry and Gardening," and published the same under the above title. He devoted some fifteen or sixteen pages to discussing the question of how the Barnacle's life is kindled. He sums up as follows: "The seeds of our Barnacles disclose themselves in the Shells of our Analiferous Plants and give new Children to the Race of Water-Fowl. 'Tis not the Barnacle who hatches these Eggs. The Sun does the mother's office." Although the Bishop was quite certain no fish ever became a fowl, it seems clear that he thought some sort of eggs got into the shells of the fish, and that these were in some mysterious way hatched by the sun. Here in this second myth there is a great mine of interesting old books to be explored before we can account in a satisfactory manner for its rise and fall.

JOSEPH JACOB.



THE BARNACLE TREE, AS DESCRIBED BY OLD WRITERS ON GARDENING.

RHUS TRICHOCARPA.

ON one or two occasions last year attention was directed to this showy

Rhus, its special attraction being the brilliant colour assumed by the leaves previous to falling. Full-sized leaves are 9 inches or 1 foot long, and possibly they would become larger on vigorous plants. Each one is composed of eleven or more leaflets; therefore a plant well clothed with leaves may well be imagined to be a very showy object at the autumn season. *R. trichocarpa* is not a well-known species, though it is not a new plant, for it was described by Miquel many years ago. It is a native of Japan and Korea, and is well worth including among select garden plants.

D.

varies slightly in each district, especially when the seeds go direct into the open ground; but so far as greenhouse sowing is concerned, it will be found that between the present time and the end of the first week of February will yield complete satisfaction. It has never appeared to me to be really material whether 3-inch pots, 6-inch pots, or boxes are pressed into service; the results depend more upon management from start to finish than the particular form of receptacle chosen for the accommodation of the seeds. My own experience undoubtedly favours boxes about nine inches in depth, but I have many friends who can heat me hands

pleasantly moist, but amateurs are urged not to be too heavy-handed with the water-pot, more especially where the white and mottled seeds are concerned, or it will inevitably be followed by rotting either of the seeds or of the roots, and perhaps of both, in any case a great injury will be done. The cultivator who carefully stores rubbish beneath the stages of his greenhouse will have slugs, and he is warned that these slimy members of the animal kingdom have a wonderful knowledge of Sweet Peas, as is proved by the fact that they only ruin the choicest varieties.

HORACE J. WRIGHT.

SWEET PEAS TOO MUCH ALIKE.

MANY of us will regret that the beginning of the new volume marks the end of A. B. Essex's notes on Sweet Peas, for they have been characterised by a freshness and outspokenness which were especially welcome to those of us who are interested in the development of these flowers. The one thing I missed in his articles and hoped to find as number succeeded number was an authoritative summing-up of the best half-dozen among the novelties offered this season.

However, we must look to Mr. Horace Wright to supply this deficiency, for he has been a constant visitor at the shows this past year, and we may well assume that, unless these novelties have been shown repeatedly, their raisers have little faith in them. Such a list would be exceedingly useful, for each year it becomes more and more difficult

generally comes when one has made the discovery for one's self.

After seeing many of these quasi-novelties and acres of others still to come, I am beginning to wonder whether we are not rapidly reaching the stage when the factors responsible for shape and colour in this flower have been obtained in all possible combinations. As it is, there are said to be some 800 varieties in existence—that is at least 750 more than most of us care to grow. The raising and fixing of these has proved an easy task, and if more are to come I think that we may well ask that they should be novelties in the proper sense of the term, that is, distinct in colour and a distinct improvement on varieties already in existence.

Much might be done by the National Sweet Pea Society to secure this end by publishing a straightforward account of their trials each season. Without meaning to be in the least invidious, I would

their warm colour and graceful outline forming a charming foil for the blossoms of the Christmas Roses. Informal grouping of both Ferns and flowers will result in much more pleasing effects than anything approaching formality would do. The accompanying illustration of a single cluster of Christmas Roses nestling among the dead brown foliage of Ferns will give some idea of the value of this combination in the early days of the year

COLOURED PLATE.

PLATE 1443.

NEW TUBEROUS BEGONIA LADY CROMER.

ALTHOUGH wonderful improvements have been effected among many kinds of greenhouse plants during recent years, there are few which bear the impress of the florist's art so much as tuberous Begonias. When we compare the best of the new varieties with those in existence a decade or two ago, the progress made is vividly brought home to us. Not only have new colours been secured; the form and size of the flower have also been greatly improved, and, unlike many other genera, the plants have not been constitutionally weakened in the process, but rather made more vigorous.

The summers of 1910 and 1911 witnessed the introduction of many superb new varieties, among which was the beautiful Lady Cromer, shown in the accompanying coloured plate. This was raised by the well-known firm of Messrs. T. S. Ware ('02), Limited, of Feltham, and was shown in superb condition by them at many of the leading exhibitions during 1910 and last year, notably at the Royal Horticultural Society's show at Olympia, the Horticultural Section of the Royal Agricultural Society's show at Norwich, and at the Royal Caledonian Society's show at Edinburgh. So highly was it thought of when thus shown that it received a certificate from each of the societies named.

The colour is exceptionally pleasing, and the flowers are of that regular, Camellia shape so much

appreciated by those who love florists' flowers. Some of the blooms shown by Messrs. Ware last year measured 10 inches in diameter. Although so large, these blooms were borne well above the foliage, thanks to the stout and erect stems, which are characteristic of the variety. Indeed, so strong is its habit that stakes or supports of any kind are not necessary. There is no doubt that this is one of the finest, if not the finest, tuberous Begonias that have ever been raised, and it is through the kindness of Messrs. Ware, who supplied the plant from which our coloured plate was prepared, that we are enabled to publish the accompanying supplement.

Tuberous Begonias of ordinarily good quality are easily raised from seed, and an article describing the process appeared in our issue for January 6.



CHRISTMAS ROSES AND FERNS IN THE WOODLAND.

to pick out those new varieties which are worthy of cultivation. This state of affairs is due chiefly to the amazing capacity some raisers have developed for detecting minute differences between their own varieties and those already in existence. My knowledge—and the same is true of many other growers—has not developed to this extent, and I have to confess that the only difference I can see between some of the novelties and the older types is in the labels at the end of the rows and, as a sarcastic friend once remarked, in the prices.

Neither can I think that the fault is altogether mine, for I find that Sydenham, in "All About Sweet Peas," frankly states that many of these so-called novelties are synonymous with the older types. The National Sweet Pea Society also helps in this matter in its lists of "too-much-alike" varieties, though, unfortunately, the information

suggest that the account should be compiled by amateurs, many of whom possess ample knowledge of the subject to deal with novelties justly. Their report would provide a sufficient basis for any awards the society saw fit to make to meritorious varieties. The raisers with real novelties to sell would, I believe, welcome such a report, while it would save many of us from wasting space which could be devoted to better purposes.

Cambridge.

R. H. BIFFEN.

CHRISTMAS ROSES IN THE WOODLAND.

ONE of the most beautiful effects in the woodland at this season is that of Christmas Roses grouped among hardy Ferns. The fronds of the latter if left on all the winter, as they should be, give us just now a rare gradation of russet and deep brown,



TREES AND SHRUBS.

THE GUELDER ROSE OR SNOWBALL TREE.

(VIBURNUM OPULUS STERILE.)

THIS is probably the most extensively cultivated of all the deciduous Viburnums grown in our gardens, and deservedly so, for it is a beautiful object when laden with blossoms in early summer. It is a variety of *V. Opulus*, which is found wild in some parts of the country. The flowers of the species are in flattened heads or clusters, only the outer ones being sterile. In the subject of this note all the flowers are sterile, forming round clusters or balls of white flowers; hence the name Snowball Tree. This *Viburnum* is excellent for small or large gardens, and is also a good town shrub. The plants thrive in most soils, and are readily propagated by cuttings of half-ripened shoots placed in a slightly-heated propagating-frame during August, or in a cold frame later in the season. Layering also forms a convenient means of increase. Mature specimens reach a height of 8 feet to 10 feet, sometimes more. Positions are easy to find for this *Viburnum* in the garden, either as a single specimen or several together in a bed on the lawn and grouped in the shrubbery border.

As a subject for large show-houses in spring the Snowball Tree also receives attention, the bushes readily responding to the heat of a warm greenhouse. In addition to the bush form, standards 4 feet to 5 feet in height are grown by nurserymen specially for forcing.

THE BEST TREES FOR LAWNS.

ENQUIRIES are often made regarding trees which are available and suitable for conspicuous positions on lawns, for, as a rule, such trees are likely to become one of the most important features in the garden; therefore it is desirable to obtain

kinds which are somewhat out of the common, but which are likely to develop freely and possess distinct characters either in foliage or flowers. The majority of our common trees are difficult to beat as regards general appearance, but they can be accommodated elsewhere, and prominent positions may be given to rarer subjects. One of the most popular trees in the neighbourhood of London many years ago appears to have been the Tulip

biloba). Its free and graceful yet upright habit, together with its curious leaves, which resemble the pinnules of a giant Maidenhair Fern, make it an object of admiration to all who see it. The Indian Bean Tree (*Catalpa bignonioides*) is one of the most beautiful of all large-growing flowering trees, for its large terminal panicles of Tecoma-like flowers are borne freely in July and August. Its handsome cordate leaves alone would war-

rrent it receiving attention, and it has the advantage of being a good shade tree. The variety of the red-flowered Horse Chestnut known as *Æsculus carnea Briotii* is richer-coloured than the type, and is calculated to create much pleasure when in bloom. A rare Chestnut suitable for the purpose is the Indian Horse Chestnut (*Æsculus indica*). It grows into a handsome tree and flowers as late as July.

Where the ground is good or no difficulty arises in providing rich loamy soil, the Knap Hill variety of *Quercus coccinea* is an excellent tree to plant, for its leaves take on particularly rich shades of colour in autumn. Two other Oaks, which well merit attention are *Q. Mirbeckii* and *Q. velutina rubrifolia*. Both are remarkable for their large, handsome foliage. *Sophora japonica* is an excellent lawn tree, for although it often forms a tall trunk with a comparatively small head of branches when drawn up by other trees, it usually develops a spreading head, with branches sweeping the ground, when it stands in the open. It bears good-sized panicles of cream-coloured flowers during late August and September. An ornamental-leaved tree of considerable merit is noticeable in *Kœlreuteria paniculata*; it also bears large panicles of



A WELL-GROWN EXAMPLE OF THE COMMON GUELDER ROSE, VIBURNUM OPULUS STERILE.

Tree (*Liriodendron tulipifera*), for good-sized specimens are to be seen in some of the older gardens. There does not, however, appear to be the same disposition to plant it now, though it is worthy of a corner on an extensive lawn, for few trees are more interesting when in bloom, and its leafage is not dense enough to kill the grass beneath the shade. Another useful tree which might be used more often is the Maidenhair Tree (*Ginkgo*

showy yellow flowers in August, which in sunny years are succeeded by curious triangular, inflated fruits. The Red Gum (*Liquidambar styraciflua*) is popular in some places, for its foliage colours brilliantly in autumn. A rare Walnut which might be provided with room is *Juglans cordiformis*. It differs from the common Walnut by its fruits being borne in drooping racemes. The Constantinople Nut (*Corylus Colurna*) is an

interesting shade-producing tree which is rarely met with. Among the Limes, *Tilia dasystyla* may be singled out as specially worthy of attention, for its leaves keep a deep green colour to the end of the season, which is not usual with some Limes. *Fagus sylvatica heterophylla* (the Cut-leaved Beech) forms a handsome specimen tree well suited for a lawn; and the same may be said of the Golden-leaved Larch (*Pseudolarix Kämpferi*). Although the Mulberry is popular as a lawn tree in some quarters, it is not to be generally commended, for when its fruits are ripe they drop and cause annoyance by staining the clothes of children and others who may be tempted beneath the branches. Purple and Copper Beeches are, however, commendable in every way. Among evergreen conifers, the Cedars are perhaps most popular, Lebanon, Atlas and Deodar all being available. Perhaps one of the most widely planted at present is *Cedrus atlantica glauca*. *Cupressus lawsoniana*, *C. pisifera*, *C. macrocarpa* and *Thuja plicata* are all useful. Weeping trees are favourites with most people, and half-a-dozen good ones are *Ulmus montana pendula*, *Fagus sylvatica pendula*, *Fraxinus excelsior aurea pendula*, *Cratægus monogyna pendula*, *Ilex Aquifolium pendula* and *Betula alba Youngii*.

Useful smaller-growing trees may be obtained in *Magnolia conspicua* and *M. soulangeana*, with white and white-flushed purple flowers respectively; *M. Fraseri*, with buff-coloured flowers of large size;

Almond find many admirers, while *Pyrus spectabilis flore pleno* is well worth attention. Double-flowered Thorns, both scarlet and white, are always attractive, and *Cratægus Crus-galli var. splendens* is worth planting if only for the sake of its autumn colour.

If one *Laburnum* only is wanted, that one should be *L. Watereri*, a hybrid between *L. vulgare* and *L. alpinum*, partaking of the good qualities of both. The White Beam Tree (*Pyrus Aria*) provides a showy variety called *majestica*, which is well worth anyone's attention, both by reason of its silvery foliage and coral red fruit. *Davidia involucrata* will doubtless become popular for a lawn tree, though it is yet too early to judge of its decorative value. Its showy character in China, however, is highly spoken of. W. D.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

ALTHOUGH the Apple, or at any rate its progenitor the Crab, is indigenous to this country, and the many good varieties which have sprung from it have been with us for centuries, and although it is the most valuable and easiest-grown of all our hardy fruits, and can be grown in many parts of our country to a perfection

of our race. We move but slowly, but we are now waking up in the matter of Apple-growing, and the rising generation will, I believe, live to see the time when home-grown Apples will be as plentiful and indispensable as the Potato is to-day, when every farm, however small, will have its orchard, and every hedge in every field, as well as every cottager's garden in most of our counties, will be made to yield a rich harvest of this fruit. Few of us are aware of the large extent of land which has been placed under this fruit in many parts of England during the past few years.

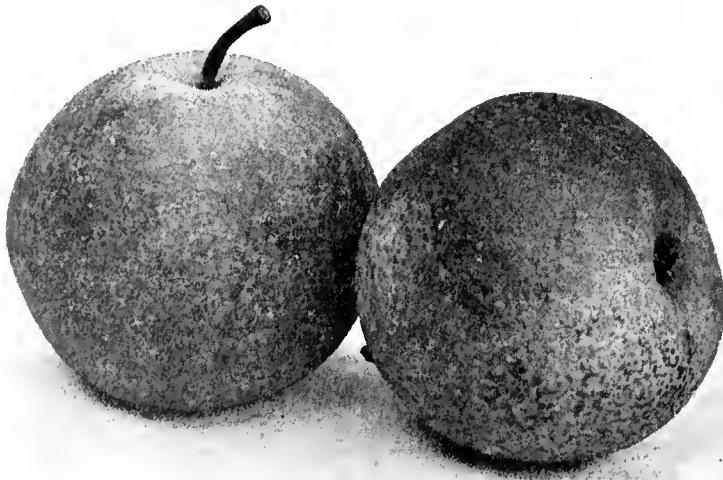
The Apple as a Market Crop.—It is now amply proved that the Apple is one of the best paying crops a farmer can grow after the trees become established, provided the land and district are suitable for its growth, that the trees are well looked after, that the right sorts are grown, and that business aptitude is brought to bear on the disposal of the fruits. As bearing on this point I recently had an opportunity of inspecting and judging an exhibition of fruit tree pruning by young students in a Worcestershire orchard. The orchard was part of a large farm, and consisted chiefly of Apples and Plums planted alternately. The Plum trees, being shorter-lived than the Apple, will be dispensed with in the course of time, the Apple trees then appropriating all the space to themselves. The trees were all standards, growing on arable land, with Gooseberry and Black Currant bushes growing between, and were apparently between twelve and fourteen years old. I never saw finer, healthier, or better-grown trees, the varieties being mostly Worcester Pearmain and Bramley's Seedling. The trees of the latter variety, I was credibly informed, both in 1911 and the previous year, had more than paid for the freehold they were growing on by the value of the crops they bore. When such facts are known, is it any wonder that Apple-growing is becoming popular among farmers?

Protecting Blossom from Frost.—The gentleman who owned this orchard has adopted a most ingenious, and as far as I know original, method of protecting his trees from damage by frost while in bloom. Lamps containing some fluid which emits a dense, warm pother of smoke when the lamps are lighted are placed at certain intervals among the trees. This has the effect of raising the temperature of the air sufficiently high to save the bloom. To warn the owner of the orchard against the approach of frost, an electric wire is attached to a thermometer among the trees, which, immediately the mercury drops to below freezing-point, rings a bell in the farmer's bedroom, when hands are immediately called up and the lamps lighted. OWEN THOMAS, V.M.H.

(To be continued.)

NEW PEAR MRS. SEDEN.

SOMETHING in the nature of a mild sensation was created at the last meeting of the Royal Horticultural Society by the presence of a small round Pear named Mrs. Seden, which was shown for the first time. The new Pear was raised by crossing Seckle with Bergamotte Esperen, the object in view being to obtain a late Pear with the flavour of Seckle. The flavour is grand, and the flesh is free from the grittiness which sometimes characterises the fruits of Bergamotte Esperen. The colour is yellow, toning to a bright crimson on the sunny side. This Pear was shown by Messrs. James Veitch and Sons, Limited, Chelsea, and it received an unanimous award of merit.



PEAR MRS. SEDEN, A NEW DESSERT VARIETY FOR USE IN JANUARY.

and *M. grandiflora* for the Southern Counties. The latter, where it will grow, is always popular by reason of its large, glossy, evergreen leaves and white, fragrant flowers. *Prunus Avium flore pleno* gives a wealth of double white flowers in spring, while the white, pink and red forms of *P. serrulata* are equally desirable. *Cercis Siliquastrum* demands attention, not only on account of its pretty Pea-shaped, rose-coloured flowers, but also by reason of its reputed historic associations, for it is popularly supposed to be the tree upon which Judas Iscariot hanged himself, and for that reason bears the common name of Judas Tree. Double-flowered Peaches and the common

that it can be grown in no other, yet its culture was engaged in by few and its great commercial value was disregarded until little more than twenty-five years ago. In my younger days one scarcely ever saw an Apple tree growing, except in some rich man's garden or occasionally in some decrepit and neglected farmhouse orchard. The Apple as a food for the people in those days was a negligible quantity, which the common people scarcely ever partook of. Indeed, I remember very well when even the peelings were appreciated as a gift.

This apathy to the more extended growth of this valuable fruit is, I am afraid, characteristic

GARDENING FOR BEGINNERS.

"WON'T GROW" DISEASE OF POTATOES.

SIMPLE and expressive as the above title appears, it is, nevertheless, a misnomer, for—if a Hibernianism may be allowed—the disease is no disease at all, or at least not what is generally understood to be such in Potatoes, although physiologically it may be so termed. But, leaving hair-splitting to scientists and coming at once to

persons only knew and once discovered the excellence of the very opposite course of action, they would, without doubt, always follow it, as the writer has from the time of his first making the discovery.

Evidence of something radically wrong with my patch of early Potatoes made itself manifest some years ago, when only here and there were plants producing anything approaching a satisfactory crop, while the others were yielding as little as from half an ounce to half a pound per plant; yet those various results were being obtained from tubers all of which had been set up in sprouting trays, and all well budded when planted. Upon first making their appearance above ground, the plants showed up quite differently in regard to the amount of haulm produced, and as great a difference in the healthiness of the haulm. An examination of some of the weakest-looking plants, made by digging them for the purpose, revealed the fact that those with the weakest haulm had not continued growing from the bud originally produced, but had sent out a slender stem from its base, having miserably unhealthy foliage and behaving somewhat as shown in the rough sketch reproduced herewith.

Further, the tubers giving the poorest yield were in every case as firm as when planted, whereas those which produced a somewhat better result had slightly decayed. It may be here remarked that it is only those tubers that thoroughly decay after planting that give the fullest return in new tubers of which they are capable under the circumstances in which they are grown. But, to proceed, here was a puzzle, and not until after having read that the probable cause of Scottish-grown "seed" giving more satisfactory crops in England than English-grown "seed" was that the Scottish-grown tubers were less fully matured did the solution appear in sight. The produce of a few plants of the very early sort above mentioned, dug while the haulm was yet green, yielded a crop far in excess of previous years. The same method of obtaining "seed" tubers has since been regularly carried out, and with like success. Can it then be doubted that in the direction here indicated lies the road to the remedy of the "Won't grow" disease?

A good plan to adopt in regard to early and second-early varieties is to select from the tubers dug for table use during the summer those that are of proper "seed" size, leaving them on the ground to green and for the skins to fasten, then carefully storing for planting the following spring. As a greater quantity of "seed" of later kinds is generally required, this should be obtained by lifting a part of a row, or whatever will yield the requisite amount, picking out the small and ware tubers and using the latter at once, as if stored they will shrivel, and either treating the selected "seed" to the greening process, if there is no risk of their getting frozen, or storing straight away at discretion.

It behoves readers to keep an eye open for the mischief, the cause of which is so far little understood.

It is quite probable that after the hot, dry summer of last year much will be heard next season of this dreaded "Won't grow" trouble.

Howsham, Lincoln.

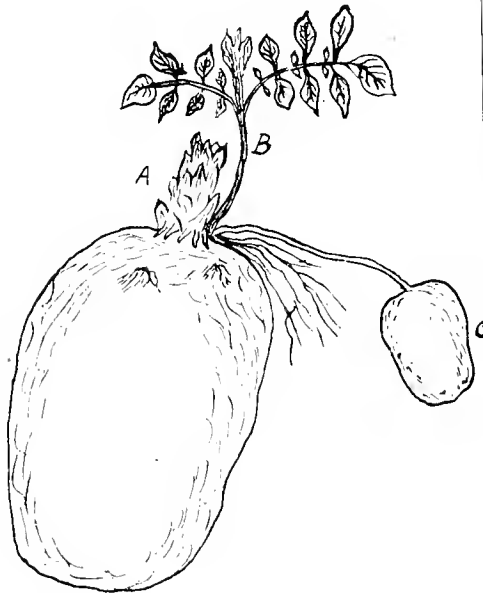
WILLIAM BOOTH.

CANKER IN FRUIT TREES.

Of the many trials that beset the fruit-grower, canker is one of the most provoking. There seems to be no certain cure for this dire pest but of remedial and preventive measures there are plenty. Most readers are doubtless painfully aware of the presence of canker. It is caused by a fungus that chiefly attacks Apple trees, but it does not confine its attention to this fruit only, as it is sometimes seen on Pear and Plum trees. For the benefit of those who fortunately are not acquainted with the disease, we depict in the accompanying illustration a few Apple shoots that are badly attacked. The best thing to do with diseased branches is to cut away the affected parts as soon as the disease is identified, using a sharp knife, afterwards applying tar to the wound. It is most important that all parts cut away should be collected and straightway burnt. Some trees are far more prone to this disease than others. Trees of good eating Apples, particularly Ribston Pippin and Cox's Orange Pippin, are subject to canker, and the writer has in mind large plantations of Dumelow's Seedling (Wellington) that are being grubbed up owing to canker and replaced with Bramley's Seedling, which seems to withstand the disease quite well. It appears that those trees having the thinnest and smoothest bark are most susceptible to attack. American blight is often the forerunner of canker, and injury by hail or frost and bad pruning are common means whereby the canker fungus will enter a tree. Good results follow the application of superphosphate of lime, nitrate of potash, nitrate of soda and sulphate of lime, mixed in about equal parts, with rather more of the superphosphate. This should be applied in autumn and spring in the proportion of a quarter of a pound to the square yard. The mixture should be sown round the tree and lightly pricked in with a fork.



APPLES SHOOT ATTACKED BY CANKER. NOW IS THE TIME TO EXTERMINATE THIS PEST.



POTATO "SET" MAKING POOR GROWTH. A, ORIGINAL SPROUT MADE IN TRAY; B, WEAK HAULM FROM BASE OF A; C, SMALL AND ONLY TUBER FORMED.

the main point, it may be said that the conditions under which Potatoes either absolutely refuse to grow or yield from nil to about half a crop are two, and each is due to a different cause.

When no growth whatever takes place, it is safe to assert that the tubers have either accidentally or carelessly been exposed to just sufficient frost to kill the bud within the "eye," and yet without doing the tuber damage enough to make it apparent that it has been frost-bitten unless very closely scrutinised, when, immediately within the "eye" and round the bud, or place where the bud or sprout should appear, a very small arc of brown discoloration may be observed in the case of tubers that have not been put through the greening process often practised on those reserved for "seed" purposes. But if they have been greened, the mischief may easily pass unobserved by even a very critical eye.

So much for the first cause of the trouble, which is, undoubtedly, very rare; but not so the second. It is by far too common, and the method of avoiding it seems to be a lesson which many growers are much too apathetic to readily learn and profit by. The mischief alluded to is done by allowing the tubers to remain too long in the ground after full growth has been attained, or, briefly, it is due to over-ripening. How often has one heard the expression, particularly about early or second-early Potatoes required for "seed," "I'll let them stay to get ripe." If such apparently considerate

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Early Peach Trees.—Where conditions permit, these may be started any time from the end of November onwards; but where this is practised it will, of course, be necessary to use artificial means of heating. No attempt must be made at the commencement to unduly force the trees into growth. No fire-heat will be required for the first fortnight, unless the weather at night is very cold. Give a free circulation of air in the daytime and keep a temperature of about 40° to 45° at night.

Later Trees.—Excellent crops of fruit may be obtained from either permanently-planted trees or those grown in pots in houses containing no artificial heat. Pruning and the cleansing of the house and trees should be done now as soon as possible. Assuming that the trees are in a healthy condition, the borders will merely require top-dressing after the trees are pruned and cleansed.

Vines.—These, too, require an annual cleansing, both of the rods and surroundings, to maintain them in a healthy condition. Those that are still resting ought now to be pruned without delay. Cut back last year's growth to within two plump eyes at the base with a sharp knife. Well wash the house, both woodwork and glass. This is very important, especially where red spider and mealy bug have been troublesome. Wash the rods well also with an insecticide after first removing the loose bark.

Strawberries.—To force these successfully, select plants that were grown last season expressly for the purpose in 5-inch or 6-inch pots, and which have become well filled with roots and possess well-ripened crowns. Place the pots near to the glass and water very carefully for a time, though the soil must not be allowed to become dry. Start the plants quite gradually, inuring them to more warmth as the foliage extends.

Dwarf Beans.—Make occasional sowings of these for fruiting under glass. Pots 9 inches in diameter are a convenient size. Fill about half-way with loam not too fine and about half the quantity of horse-manure mixed with it, such as that used for making Mushroom-beds, leaving the soil quite loose. Sow a couple of seeds in four or five places equidistant. These soon germinate in a warm house, and make good bushy plants if the points are removed and allowed to break. Top-dress afterwards to within 1 inch of the top of the pot. Water freely and syringe the plants while growing.

Onions.—A sowing should be made now under glass where large Onions are required either for exhibition or kitchen use. Sow the seed thinly and evenly in boxes containing a fairly porous mixture which has been passed through a fine sieve, and give a good watering in. Put the box in a gentle heat, and when the seedlings are through, place near to the glass.

Chrysanthemums.—The earliest batch of cuttings, especially those plants that are intended for providing large blooms, will now be ready for potting singly. Cuttings may be taken of decorative varieties, placed in small pots of light, sandy soil, and either rooted in a cool house or frame. Keep them close until rooted and protect from frost.

E. BECKETT, V.M.H.

Adlenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Kitchen Garden.—As long as the early hours of the day are too cold for nailing and pruning, any ground that has been freed of crops should be cultivated, on frosty mornings transporting manure to those quarters that require enrichment, and spreading it evenly over the surface ready for digging in. The burnt material remaining from rubbish and wood fires and also composts should be removed to where they will do most good to crops and plants.

Seed-Sowing.—Broad Beans in double rows and at 5-feet distances between the rows should be sown at once, and on sunny borders the earliest crop of Peas may be sown. It usually happens at this particular period that ground prepared in autumn can be rendered sufficiently dry by running a Dutch hoe through it in the forenoon and sowing in the afternoon. The drills at this season are best shallow, the covering being drawn over the seeds in the form of an extended mound. Sow rather thickly, and do not depend too much on the success of this crop.

Small Crops.—At the same time sow also Spinach, and among the Spinach a few seeds of Radish and Cos and Cabbage Lettuces. If there is space near the base of a wall with a south aspect, seeds of Radish and of Lettuces should be sown at the same time. Early Carrots sometimes succeed sown thus early, and some gardeners sow Leeks now. The seeds are a long time germinating, and the longer the season Leeks are given, the bulkier the crop.

Horseradish.—The finest roots are produced from young plantations, and these may be made at any time in spring, the earlier the better. The ground should be dug two spits deep, and short pieces of the roots inserted at a depth of 10 inches or so from the surface as the work proceeds. One foot apart is a suitable distance to arrange each set.

Jerusalem Artichokes.—Lift these, store as many as will be required, and plant medium-sized roots for next year's supply. They require a heavy dressing, preferably of cow-manure, and deeply-worked soil.

Taking Cuttings.—Last autumn the cuttings of tender plants were so scarce that some of the kinds rooted then have been kept growing all through the winter, and two or three batches of cuttings rooted from them. After this time most kinds will root freely in a propagating-pit where there is enough bottom-heat to enable the cuttings to strike out roots in a few days. The plants which root freely at this time include Lobelias of the King William and Waverley type, Ageratum, Verbenas, Salvia splendens in variety, Calceolarias Burbidgei and amplexicaulis.

Sowing Flower Seeds.—Seeds of hardy and half-hardy perennials to flower the same season may now be sown. Chelone barbata, Pentstemons heterophyllus and the florists' varieties, Michaelmas Daisies, Commelina cœlestis, Verbena venosa, which requires a greater heat and longer period for germination than the others mentioned; Hollyhocks in variety, sown now in boxes, pricked off into 3-inch pots as soon as large enough to handle, and grown on without check, make good plants for September blooming.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

Alpine and Rock Plants.—There are innumerable odd corners and partially-shaded borders in town gardens which may be made very beautiful and interesting by planting alpine and rock plants in them. I have in my mind's eye the charming picture made by hardy Ferns and alpines which filled a sunless recess between two villas. Others not so treated looked bare and uninteresting. These plants require a porous soil, and an ordinary border may be easily made suitable for them by adding old mortar rubble, spreading it about two inches deep on the surface, and then digging the whole in. Low-lying borders should be raised a few inches, and flat rockeries on such are generally successful.

Select Plants.—*Iberis corifolia*, *I. c.* Little Gem, *Myosotis rupicola*, *Phlox procumbens*, *Statice incana nana*, *Silene acaulis*, *S. alpestris*, *Achillea rupestris*, *Arabis alba*, *Campanula garganica*, *C. muralis*, *C. turbinata*, *Aster alpinus*, *A. a. alba*, *Arenaria montana*, *Draba gigas*, *Dianthus alpinus*, *Potentilla formosa*, *Sedums* and *Saxifrages*.

Digging Shrubbery Borders.—Every winter, and often every spring, the borders in which trees and shrubs are grown are dug, and much damage is done to the roots. Recently-formed shrubberies may be freely dug, provided the roots of the plants are not interfered with. Such loosening of the soil in which there are no roots ventilates the border, especially where heavy soils obtain, and the ventilation promotes healthy growth. Old shrubs are never too well fed at any time, and advantage should be taken of any tree leaves on the premises to scatter them on the surface and lightly cover them with soil.

Auriculas.—The choicest varieties in the borders should be protected from heavy rains, sharp frosts and snow. Although these plants are hardy enough to stand exposure through the winter, the light protection afforded will result in flowers of greater perfection. Keep all faded leaves regularly removed from the base of the plants, and put on the following compost in the form of a top-dressing: Light fibrous loam, leaf-soil and sand, all passed through a fine-meshed sieve together. Pack this compost nicely round the plants with the hands.

Periwinkles.—These are grand plants for the town garden, as they will thrive under rather adverse conditions. It is often a difficult matter to get plants to grow under trees, but Periwinkles will succeed. Not only do they grow well, but flower nicely, and both foliage and flowers are very clean. This is a good time to put in plants. The soil must be deeply dug, moderately enriched with manure, and if clayey, rendered porous by the addition of some gritty material. Strong, well-rooted runners planted about eighteen inches apart and duly pegged down will soon grow and cover the soil with a beautiful carpet of greenery.

The Garden Frames.—Excessive moisture is the great enemy of plants now growing in cool frames, and every effort should be made to lessen that moisture by ventilation, the picking off of fading leaves, and not spilling any water while watering plants that really require it.

The Greenhouse.—Ventilate between the hours of 9 a.m. and 2 p.m., warm the pipes every night, and water the plants in the morning only.

TOWN GARDENER.

THE KITCHEN GARDEN.

HINTS ON SOWING EARLY PEAS.

THERE is no vegetable more highly appreciated than the first dish of early Peas, and professional gardeners, as well as amateurs, are always eager to have this at the earliest possible date. During recent years the list of varieties suitable for early sowing has been greatly increased, but to the inexperienced this is not entirely an unmixed blessing. Many of the newer wrinkle-seeded varieties are of excellent quality, and quite suitable for sowing during the early days of February, providing a few simple precautions are taken; but if they are sown in the same way as is usually adopted for early round-seeded, midseason and late sorts, partial or total failure may, and often does, accrue. Indeed, it is to excusable ignorance at sowing-time that most of the failures among early wrinkle-seeded Peas are due.

Most amateurs, and not a few professionals, know only too well the disastrous tendency which the seeds of many of these varieties have to rot in the soil. They make a heroic attempt to germinate, but never succeed in getting above the soil. For this the seedsman is too often blamed. Were a portion of the same seeds sown a month or six weeks later, in nine cases out of ten they would be found to germinate quickly and grow away vigorously, thus exonerating the seedsman. It is a not very well-known fact that all seeds need a certain temperature, combined with moisture, in which to germinate; *i.e.*, at some particular temperature seeds of a certain kind will germinate more quickly than at any other. Increase or decrease the temperature from that point, and germination goes on more slowly; carry the temperature still further in either direction, and germination ceases, and if moisture is present in sufficient quantity decay sets in.

This is what, to a very large extent, occurs with Peas sown early in the year. The soil then is exceptionally cold and usually very wet, and if the seeds are sown, as is too often the case, as deeply as later sorts, the evil is aggravated.

A hint given to the writer some years ago by the late Charles Foster has proved so successful that it is here recorded for the benefit of others: Instead of sowing early wrinkled Peas 2 inches deep, as is usually done, only just cover the seeds with soil. If the natural soil is of a heavy, wet character, put a layer of coarse sand, half an inch thick, in the bottom of the shallow drill, sow the Peas, and cover them with another half an inch of sand, but no soil. This, owing to its inability to hold water to any appreciable extent, keeps the seeds comparatively dry, and, what is more important, is warmer than the surrounding soil. Round-seeded Peas do not seem to suffer so badly, but the wrinkle-seeded sorts are so much superior in quality that they more than repay for the little extra trouble that is entailed in carrying into effect the hints given above. H.

THE EDITOR'S TABLE.

Iris stylosa from Winchfield, Hants.—The Hon. Mrs. Walkinshaw sends from Hartley Grange, Winchfield, Hants, some remarkably fine flowers of this beautiful and fragrant winter *Iris*, known better, perhaps, to some under its old name of

I. unguicularis. The following note, which accompanied the *Irises*, will, we hope, induce others to grow these plants: "I am sending you a few of my blue *Iris stylosa* for your table. I have a border on the south side of my greenhouse, about twenty feet long, planted two years ago. They have bloomed incessantly since November, and I gathered over one hundred and fifty blooms last week. I have a Myrtle hedge next to them, and generally put some of the green with the *Iris*, so I send a few sprays. I am sending buds only, in the hope that they will travel better and open in water. They come out very fast, and I pick between twenty and forty blooms a day."

Rhododendrons from Ireland.—Mr. E. Stuart Moore, Ballydivity House, Dervock, County Antrim, sends some beautiful trusses of *Rhododendrons* cut from the outdoor garden. The flowers are beautifully clean and fresh, and particularly welcome at this season. Mr. Moore writes: "I am now sending you a few blooms of *Rhododendrons* which you might like to see. They are growing on bushes from 12 feet to 20 feet in height, and have been flowering since the first week in December in sheltered corners of the lawn. The white flowers are Mrs. John Clutton, and the scarlet are from *Rhododendron nobleanum*. The splendid scarlet colour of these flowers looks dazzlingly bright in the sunshine, and brightens up the garden on the dullest day during the winter. The plants are over thirty years old, and are still growing larger. This place is in the North of Ireland, about five miles from the Giant's Causeway. Some years these *Rhododendrons* commence to flower the first week of November."

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Lælio - Cattleya Bella alba The Dell variety.—A bold and delightful variety, shown by Baron Schröder. The flower is of grand form, massive, white, with purple lip.

AWARDS OF MERIT.

Carnation Wivelsfield Wonder.—This is a white-ground fancy variety of the Perpetual-flowering class, a set which has proved more popular in America than in this country in the past. The flower is large and not over-petalled, the white ground being freely and irregularly striped with scarlet. Exhibited by Messrs. Allwood Brothers, Wivelsfield Nurseries, Hayward's Heath.

Cattleya Maggie Raphael alba Orehidhurst variety.—This is indeed a lovely *Cattleya* with beautiful recurving white sepals. The petals are likewise white and very broad. The lip is pale rosy mauve, with golden markings in the throat. Shown by Messrs. Armstrong and Brown, Tunbridge Wells.

Cymbidium rosefieldiense.—A very remarkable hybrid, shown by de Barri Crawshay, Esq. The large flowers are of emerald green, speckled with crimson brown. The lip is very pale yellow, likewise speckled.

Cypripedium Catiline.—Large flower of good shape, shown by the Duke of Marlborough. Dorsal sepal possesses rose purple markings; petals yellow, tinted purple. Parentage: *C. Mrs. William Mostyn* × *C. Leonidas superbum*.

Cypripedium Jucundum.—A grand flower with a hooded white dorsal, lined purple, and pale green base. The lip and petals are of a mahogany

colour. Shown by Messrs. Sander and Sons, St. Albans.

Cypripedium nitens beckensis.—A magnificent variety, shown by J. Gurney Fowler, Esq. The flower is erect, of excellent form, with brown wavy petals and greenish base. The well-formed dorsal is well blotched.

Cypripedium San Actæus Westfield variety. A very handsome variety, shown by F. A. Wellesley, Esq. Parentage: *C. insigne* Harefield Hall × *C. Actæus langleyensis*. The dorsal is very large, white, blotched purple.

Lælio-Cattleya Mrs. W. Hopkins.—A very attractive flower, also shown by F. A. Wellesley, Esq. Parentage: *L.-C. haroldiana magnifica* × *L. Iona nigricans*. The perianth is a lovely art shade of buff yellow, tinged with mauve at the tips of the segments. The lip is well defined and of a purple colour.

Odontoglossum crispum Queen of the Morn. A very striking *Odontoglossum* sent by W. Cobb, Esq., Normanhurst, Rusper, Horsham. The individual flowers are of good form, rose-tinted over a white ground.

NEW FRUIT.

Pear Mrs. Seden.—A description and illustration of this new fruit will be found on page 36.

The foregoing were shown before the Royal Horticultural Society on January 9, when the awards were made.

THE GREENHOUSE.

SINGLE-FLOWERED CHRYSANTHEMUMS FROM SEEDS.

DURING the past few years a great advance has been made in the raising of young plants of the single-flowered *Chrysanthemums* from seeds. The plants so raised are generally nice, bushy specimens, dwarf, carrying good foliage and bearing flowers freely. For the decoration of greenhouses and conservatories during the months of October, November and December the plants are extremely valuable.

How to Raise the Seedlings.—The seeds should be sown during the latter part of February or early in March. Make use of boxes so as to have plenty of space on which to sow the seeds, and distribute them thinly, then the resultant seedlings will not be too much crowded. The leaves of the young seedlings spread very much and take up a lot of room. The boxes must be about 4 inches deep; crocks for drainage are not needed, but some half-decayed leaves ought to be put in the bottom, then a very thin layer of well-rotted manure that has been passed through a half-inch-mesh sieve before the sifted compost is used for the filling of the boxes. Loam and leaf-soil in equal quantities, with some sand or grit to render all porous, will constitute a nice compost. The latter should be made moderately firm, levelled on the surface, and then allowed to dry for an hour after being watered. Sow the seeds thinly, as previously advised in this note, and cover them a quarter of an inch deep, but do not water the covering soil immediately afterwards. There should be a space at the top of the boxes about three-quarters of an inch deep. Place loose pieces of glass on the boxes, then brown paper. A suitable position for

the seed-boxes is a warm corner on a stage in a greenhouse or a heated frame. A mild hotbed in a frame is the best place for them. In the latter position the seedlings will appear before it is necessary to give water, but on a dry stage the soil will dry up more rapidly, and watering by immersion will be advisable occasionally. Directly the seedlings appear, the brown paper and pieces of glass must be gradually removed and air admitted. If the boxes are in a closed frame, the glass lights must be lowered a little to admit air.

Transplant the Seedlings in boxes as soon as they are large enough to handle freely. Fill the boxes in exactly the same way as recommended when preparing them for the seeds, but at this stage the cultivator may add a small quantity of rotted manure to the whole of the soil. Put out the seedlings 3 inches apart each way, give them water through a rosed watering-can, and place the boxes near the glass in a cool frame. At this stage the young plants resemble Celery seedlings very much.

The First Potting.—The seedling Chrysanthemums grow quickly, and before they get at all crowded in the boxes it will be advisable to pot them singly in 3-inch pots. Use a good compost, one such as is used when plants intended for the production of large blooms are being dealt with. The newly-potted plants must be kept almost airtight in the cool frame for three or four days, and carefully watered and syringed occasionally. From this stage forward treat the plants generously, but do not nurse them too much, or they will possess weakly shoots. Avon.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

VIOLETS (C. T.).—We could see nothing amiss with the flowers sent, and with "wonderfully healthy foliage and plants covered with buds" there can surely be but little wrong. All that is required is a little more patience on your part, and for the plants more sunlight and snubnet, and all will be well. At this period of the year all vegetable-life is either dormant or in sluggish mood, and Violets in frames are no exception. Another year you might improve matters a little by arranging the frame on a south or south-east border, where it would receive the benefit of the early morning sun; or by cultivating some of the plants in pots and introducing them to a slightly-warmed greenhouse, earlier blossoms would be available.

TREATING STEEP SLOPE (Riada).—Unfortunately, you say nothing about the nature of the soil or even the position, whether in sun or shade; hence we are unable to afford you a very definite reply. Generally speaking, and seeing the Azaleas are doing so well, we should first think of Rhododendrons in groups of choice sorts, interspersed with such Lilies as *Hansonii*, *candidum*, *testaceum* and *platyphyllum*. Usually on such slopes the Rhododendron, in well-prepared soil, does well; indeed, some of the finest garden pictures we have seen have been so made, and not only provided a feature alone, but gave

just that touch of boldness and flower beauty necessary. In the circumstances you describe, you have a case on all fours with those we have in mind, and unless there are obstacles in the way that we know not of, the adoption of the suggestion we have made would be in complete harmony with what now exists. The Rhododendrons should not be planted on the sharp slope of the bank, but rather counter-sunk in flattened areas, so that the rainfall from the upper portions of the bank would reach the roots of the plants in due course.

POLYGONUM BALDSCHUANICUM (Amateur).—It is impossible to say why your plants of *Polygonum baldschuanicum* have not flowered, but it is probable that they have too free a root-run, and that the soil is too rich and too moist, and rank growth is formed instead of flowers. We advise you to place a plant or two in full sun where the soil is comparatively poor and thin, and try whether that will have the desired effect.

MANURE FOR A LAWN (Artificial).—The following manure will make a good dressing for your lawn, applied at the rate of about five pounds to the square rod: Superphosphate of lime, two parts; bone-meal, one part; and sulphate of ammonia, one part. Mix thoroughly before applying. It would, however, be advisable to give the lawn a good dressing of well-rotted manure now, and an application of the other manure in wet weather during April or May. Well-rotted manure is preferable for your herbaceous border.

CHRISTMAS ROSES (A. E. T.).—Christmas Roses established in tubs or pots would not be injured by being placed in a dwelling-room in which gas is not burned while they are in flower. As soon as the flowers are over, the plants should be placed in a cold frame to harden off; then about the end of April they should be plunged out of doors in a shady position. They will require plenty of water, both during the time they are in the frame and afterwards, while, when growth is active, liquid cow-manure once a week will do good. Do not give manure-water, however, unless the plants are thoroughly established. When first placing the plants in tubs see that the tubs are well drained and nothing but really good, sweet, loamy soil, with a little sand, is used, for the plants ought to remain undisturbed for a number of years, as after root disturbance they are often a couple of years before they do themselves justice again. It is not possible to say how long they would continue to give satisfactory results in the same tubs, as so much depends on the skill of the cultivator.

ROUGH DRY WALL (A. D. F.).—So far as natural stone is concerned, Kentish rag or the Guildford sandstone would be the best from the point of view of cheapness and nearness to where you require it. You might for the former apply to the manager at the stone quarries, Tub's Hill, near Sevenoaks, or to Messrs. J. Cheal and Sons, Crawley, who, we believe, supply suitable stone for the purposes of your wall, large blocks of stone are not generally required, though this naturally depends not a little upon the height and extent of the erection. By this we mean that large selected blocks are more costly, if more imposing in effect. On the other hand, thin, flat slabs are just the reverse, and frequently unsuitable to plant-growing. In all probability a little professional advice on the spot before you proceed much further would be a wise policy. Clinkered burrs are not bad if of a rustic nature and the original brick pattern has been largely eliminated. These things afford good interstices for planting, though generally they are hard, non-porous when much glazed, and often unsympathetic with the plants.

HARDY ANNUALS (A. P.).—We advise the following procedure as likely to be successful: First of all, aim at growing, as far as possible, close-growing or prostrate annuals, such as are not likely to feel the injurious effects of the sea gales, as taller ones would do. It is well to grow the *Mesembryanthemum* which are of procumbent growth, M. tricolor, to wit; also the various varieties of Mignonette, which in such a position should not grow too strongly. Anzallis, in variety, would also succeed. Alonsoa, as *A. Warszewiczii compacta*, and the dwarf forms of *Alyssum maritimum* would be certain to succeed. The dwarf varieties of *Antirrhinum*, though not strictly annuals, thrive well when treated as such. *Calandrinia*, both *C. grandiflora* and *C. umbellata*, should be tried. *Portulaca* in varied and striking colours, both single and double, would be most reliable. The dwarf-growing *Coreopsis* should do well; they flower freely in exposed situations. The dwarfest of the *Candytufts*, if sown thinly and then thinned out, should be very useful. The compact-growing varieties of the *Cornflower* and *Centranthus macrocephalus* ought to be relied upon. *Dianthus chinensis* and *D. Heddevisii* should both be tried; these do well near the sea. *Dimorphotheca aurantiaca* and the *Edelweiss* are both worthy of trial. Both the *Wallflowers* and *Erysimum prostratum*, their near relative, are very reliable; these may both be treated as annuals by sowing early. The *Linarias* (*Toadflax*) would be a good choice, also the dwarf varieties of *Marigolds*. The East Lothian Stock would be much better to grow than the *Ten-week*; the former is more sturdy and holds itself more firmly in the soil. The dwarf *Nasturtiums* are excellent in seaside resorts, so also are the dwarf forms of *Phlox Drummondii*. The compact-growing varieties of the *Statice*, including *S. latifolia*, the *Sea Lavender*, should be tried. Of the annual *Asters*, the best to grow are the dwarfier sorts, and especially those with small flowers. These do well and transplant well. Aim at some amount of shelter, if possible, by staking any annual that grows a foot or so in height. Make use also of pieces of sandstone to steady the plants. Many thrive better in this way and are held all the firmer.

THE GREENHOUSE.

PURPLE VERBENA (Mrs. F. K.).—We are much obliged to you for calling attention to the value of *Verbena Beauty of Oxford* for bedding purposes. The most satisfactory purple-flowered kind we know is *Purple King*, while *Favourite* is a beautiful rich purple, but with a white eye.

RAISING CYPRIPEDIUMS FROM SEED (H. J.).—The best time to sow *Cypripedium* seed is soon after it is ripe; but if this happens during November or December, it should be stored in a dry cupboard till the beginning of January. For a seed-bed a well-established *Cypripedium* should be chosen, preferably one that has the soil pressed firmly round the roots and about half an inch below the rim of the pot, or most of the seed will be washed over the side during the process of watering the plant. Most of the sphagnum moss ought to be cut off, and the surface should be in a sweet condition, because no *Orchid* seed will germinate where the compost is at all sour. Having selected a suitable plant and prepared the surface as stated, the seed may be sprinkled thinly around the base of the *Cypripedium*. No covering is needed, and several pots can be sown, because we have found that, although given exactly the same treatment, sometimes seedlings only appear in one pot. The minimum temperature should be 65° Fahr., with a rise of 10° or so during the day if the sun is warm and bright. The greatest care is necessary when giving water, an operation best performed gently with a fine-rosed water-can, while the surroundings must be kept moist by occasionally damping the stages, &c. On no account should the plant be allowed to become dry, or failure will be the result. Germination takes place usually in two or three months; but this must not be taken as conclusive, for we know of cases where seedlings have appeared after two years. We wish you every success.

BEGONIA BUDS DROPPING (J. E. S.).—A fall in temperature is the most likely reason for the dropping of the buds and flowers on your plants of *Begonia Gloire de Lorraine*. During the lowering period a light, buoyant atmosphere is very necessary, and in the event of a moisture-laden atmosphere the effects of such a fall in temperature would be far more injurious than in a drier structure. This does not, of course, imply that the house in which they are growing is to be kept unnaturally dry, or that the plants are to be kept dry at the roots. With regard to the most suitable temperature for this *Begonia*, our experience is that it is most satisfactory when grown in a structure where a minimum night temperature of 50° is maintained. During the day the thermometer may with advantage run up to 60° or 65°. As the temperature named by you is probably taken in the daytime, your ideas in this respect are about the same as ours. There must, however, have been some decided check to account for the buds and flowers dropping as yours have done. Do you water them with cold water? If so, this may be the cause of the mischief, as the water used should be about the same temperature as the atmosphere of the house. You cannot show the white variety under the name of *Gloire de Lorraine* unless the prize, or prizes, are offered for different forms of *Gloire de Lorraine*; if for *Gloire de Lorraine* itself, the white one would be inadmissible. Crotons would succeed in the same temperature, but in their case a night temperature of 55° to 60° would be better. Still, the difference is not a great one.

CYCLAMEN (Moor-Hen).—The under side of the leaves sent seem to have been badly attacked by that troublesome mite which is generally termed the *Begonia* mite, owing to its having first made its appearance on *Begonias*. We cannot, however, find any trace of the minute insects thereon, but have little doubt that they are the cause of the damage, especially as the flowers on plants troubled by the mite are affected exactly as those sent by you. Furthermore, we cannot understand the under side of the leaves getting into such a state within a week, and think it must have been coming on gradually till it reached such a pitch as to come under your notice. A dry atmosphere is very favourable to the development of the mite, and owing to the excessive heat and drought of last summer it has in many instances given trouble where none has been previously experienced. We cannot think the manure-water is to blame, otherwise the roots should show the effects thereof. By dipping in a solution of nicotine, or vaporising with the X. L. All Vaporiser three or four times at intervals of a few days, the pest can be destroyed; but, of course, a good deal of the mischief is already done.

CARNATIONS (M. R.).—You ask which are thought most of, Carnations with smooth-edged petals or those whose petals are fringed at the edges? We cannot say. There are those who advocate and admire both, though flowers having fringed petals were for a long time not tolerated by the older school of florists. The florists' ideal of a good petal was a perfectly smooth edge, and there are many such among the so-called "class" flowers shown on boards to-day. Many border Carnations otherwise good are inadmissible in the above classes because of the obscurely indented edges of their petals. On the other hand, the great majority of the so-called American Carnations have decidedly fringed petals, and the fact that these are grown by hundreds of thousands, or probably millions, to supply the markets of the world is the best proof of their universal popularity. These latter require greenhouse treatment, however, while many of the border kinds are quite hardy. Some good varieties are *Lady Hermione* (salmon), Mrs. Robert Morton and W. H. Parton (apricot shades), *Trojan* and Mrs. Eric Hambo (white), *Liberté*, Mrs. Francis Wellesley and *Sir Lancelot* (fancies), *Lady Hindlip* and *Robert Berkeley* (scarlet), *Duffield* and *Solfaterra* (yellow) and *Duchess of Wellington* (lavender). Leander is of salmon colour, and belongs to the border class. Trips are minute insects and abound in nearly all flowers and plants. They are usually of a dark colour, and easily detected with a magnifying-glass.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

A Dahlia Conference.—A conference on Dahlias will be held in connection with the National Dahlia Society at Carr's Restaurant, 264, Strand, on Friday, March 8, at 6.30 p.m., when some interesting papers relating to Dahlia culture will be read.

Perpetual-flowering Carnations.—A conference in connection with the exhibition to be held on March 21 at the Royal Horticultural Hall has recently been arranged by the committee of the Perpetual Flowering Carnation Society. Full particulars of this will be published in due course.

Honour for Mr. Harman Payne.—For many years past, our contributor Mr. Harman Payne has occupied the unique position for an Englishman of being a regular correspondent to the French gardening Press. In recognition of his services, the French Government has just bestowed upon him the Palmes Académiques, a decoration which carries with it the title of Officier de l'Instruction Publique. It will be remembered that Mr. Payne has already been successively Chevalier and Officier of the Order of the Mérite Agricole.

Our Sweet Pea Number.—Following our usual custom at this season, we shall devote the greater part of our issue for February 3 to articles on the Sweet Pea. This flower is now so universally grown, and so many requests for information relating to it are made, that we feel sure a Special Number will be appreciated by the bulk of our readers. We have had prepared a number of articles of more than usual interest by the leading growers and exhibitors of Sweet Peas, among them being Mr. F. J. Harrison of Ulverston, Mr. Thomas Stevenson, Mr. G. F. Drayson, Mr. Horace J. Wright and Mr. E. H. Christy. Professor Biffen, the Rev. J. Jacob and Miss Philbrick will also contribute articles. In addition, there will be a coloured plate of four excellent varieties of Sweet Peas, and a new and unique portrait of the president of the National Sweet Pea Society. The price of this special issue will, as usual, be one penny.

Cyclamen Coum Among Grass.—The various hardy kinds of Cyclamen are among the prettiest plants imaginable for the wild garden, for, apart from their showy flowers in spring, summer, autumn or winter, as the case may be, their leaves also offer an attractive feature. It does not often happen, however, that they are planted among grass, yet C. Coum thrives well and is very effective when placed in such a position. Some years ago it was noted in a Cornish garden occupying a large area on a lawn where the ground was comparatively light and loose; and quite recently a batch of plants growing among grass recalled the more

extensive Cornish plantation to mind. As the red flowers appear from January onwards for two or three months, they form a pleasing contrast to the whites, yellows and blues of various low-growing bulbous plants which bloom at the same time.

A Good Winter Greenhouse Heath.—For several weeks past the South African Erica melanthera has been one of the most notable plants in the greenhouse at Kew, both on account of its floriferous character and from the unusual manner in which it has been grown. As a rule, the cultivation of Ericas in pots is attended during the early stages with much stopping of the shoots; but in the case of the plants under notice this stopping has been dispensed with, and the plants have run up with single stems to a height of 3 feet or more. They have, however, branched freely, and are uniformly furnished with side shoots from base to summit. At their widest part they are a foot or more in diameter. As all the side branches are young and strong, flowers are borne with great freedom. The pots used for the plants are 6 inches in diameter; therefore there is no appearance of over-potting. As this is possibly the strongest constitutioned of the various South African Ericas, it ought to be more frequently met with.

Pensions for Aged and Infirm Gardeners.—As will be seen by a report which appears on another page, that most praiseworthy and national charity, the Gardeners' Royal Benevolent Institution, continues to carry on its good work in providing pensions for aged or infirm gardeners or the widows of gardeners. Altogether, including twenty-two put on the funds last week, there are now 254 pensioners under the care of the institution, necessitating an annual outlay of over £4,000, the greater part of which is subscribed annually by those who give a thought to gardeners who are no longer able to work, and by gardeners themselves. Unfortunately, the committee, which is a purely honorary one, is annually faced with far more deserving candidates than it is possible to place on the funds by election or otherwise. This year there were seventy-one approved candidates, and only twenty-two could be granted pensions. We appeal to all our readers who enjoy their gardens to spare a thought to those who have in the past done so much to give us pleasure by cultivating flowers, fruits and vegetables, and who, through no fault of their own, have fallen on evil days. Gardeners, too, should remember that it is an excellent security against misfortune to subscribe to the institution. Those who feel they would like to give something towards this thoroughly deserving and economically-worked charity should write to the secretary, Mr. George Ingram, 92, Victoria Street, Westminster, who will be pleased to furnish full details of the work that is done.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Cæsalpinia Gilliesii.—What a pity it is that this plant, illustrated on page 4 of THE GARDEN for January 6, is so seldom seen in our gardens! It has proved to be quite hardy with us planted against a west wall close by the entrance to the house, and last summer won admiration from all who are interested in choice shrubs. The roots of the plant are beneath big flagstones. It has reached a height of 10 feet to 12 feet in nine years, and has flowered on every growth and produced ripe seed-pods, which have been sown and are growing. It is also called *Poinciana Gilliesii*.—W. D. POPE, *King Barrow, Wareham.*

Erica gracilis.—This Heath, of which the pink form is illustrated on page 11, is one of the most useful members of the genus, and also one of the most variable. The typical kind has been grown for many years, and so has the variety *vernalis*, which is of denser growth and later in flowering than the ordinary form. The pink variety, which is very beautiful, does not seem to be much known, but the white kind, *ivalis*, is a universal favourite. It originated from the type, and its sportive character is frequently seen by some of the shoots producing coloured blossoms. *E. gracilis* is one of the least exacting in its cultural requirements of the various greenhouse Heaths, and both this and the white variety are largely grown as flowering examples in miniature pots, which may be so frequently seen in the florists' shops.—H.

Snow and Seeds.—It is surprising to see how rapidly some seeds appear to germinate after being exposed to a fall of snow, and how frequently those which have delayed long in their germination begin to grow in the first mild weather after the snow. This was well known to past generations of gardeners, and it is not uncommon to see references to this in some of the older horticultural works. It has been found that some of the *Primulas* and *Gentians*, for example, which may be naturally slow in their germination under ordinary treatment, come up very quickly after a snowfall. Auriculas are a case in point, and we find that pots or pans of seeds of *Primula japonica*, and even those with seeds of the common *Primroses* and *Polyanthuses*, spring rapidly when the snow has cleared away from them. Some have even found it useful to take snow from the open and place it on the pans or pots under glass, but the benefit is not so pronounced, as the snow melts much more rapidly.—A. M. D.

Sparmannia africana.—The summer of 1911, which was responsible for many unusual doings in the plant world, was particularly suitable for this *Sparmannia*, which is now flowering with unwonted freedom. It is a plant well known in gardens; but a most important feature of its culture is not always recognised. That is, in order to obtain a good display of bloom during the winter, it should in the latter part of the summer be fully exposed to the sun out of doors, and the hotter the sun the more flowers there will be. Of course, it must be kept properly supplied with water at that period. The flowers, which are borne in loose clusters, have spreading white petals, but their most notable feature is the brush-like cluster of long stamens, in colour purple and gold. The *Sparmannia* is a near relative of *Dombeya Mastersii*, recently figured in THE GARDEN.—P.

Euphorbia Wulfenii.—I notice in THE GARDEN for January 6 a note on the above plant by Miss Jekyll implying that it is an uncertain one to flower. I can only say that with me, since my plants reached a flowering age, they have been covered with blossom with commendable regularity. They are in heavy soil, somewhat sheltered, with south exposure.—ARCHIBALD BUCHAN-HEPBURN.

The Variegated Rock Cress.—There are two variegated forms of *Arabis albidia*, one with gold and another with silver variegation. Then there is a variegated form of the double *Arabis alpina* fl.-pl. Besides these there is the variegated Rock Cress mentioned by "A. D.," i.e., *Arabis lucida variegata*. It is not so easy to grow in the South, and likes a stronger soil than the preceding three. In addition, there is a small one with variegated leaves, *Arabis procurrens variegata*, but this is not often met with, though rather a nice little plant. I observe one catalogued as *A. bellidifolia variegata*, but I have not met with the Daisy-leaved Rock Cress in a variegated form, and have a strong suspicion that the one offered may be simply *A. lucida variegata*. I can assure your correspondent that there are variegated forms of *A. albidia*.—S. ARNOTT.

Lilium Martagon album.—An interesting note on the question of the white forms of *Lilium Martagon* reached me recently from a well-known and most capable trade grower of hardy flowers. It was suggested by a note I wrote some time ago regarding the fasciated and normal form of *L. Martagon album*. My correspondent informs me that the fasciated one comes from the Continental form of album, and he mentions having first seen this in a Scottish nursery which is no longer in existence. I saw the same stock, and learned that it was received originally from the Continent—Holland, I believe—but I long knew this fasciated form in a cottage garden, where it has been for very many years, and also in an old country house garden, in which it must have been for generations. It is a worthless, or almost worthless, variety. My correspondent has two varieties, that called *L. M. album punctatum* being the tallest and that called *L. M. superbum* the finest. From experiments with seeds of the latter he is of opinion that it is originally a sport or seedling of *L. M. dalmaticum*. I must say that its appearance gives considerable support to the opinion he expresses.—S. A.

Apple Scab.—Scab, or *Fusicladium*, is a fungoid disease of Apples and Pears which seems to be on the increase. It is found on bark, leaves and fruit. On the young twigs it roughens the surface and checks the flow of sap; on the leaves and on the young fruit it forms ugly brown blotches, the fruit often cracking because the disease stops the natural expansion of the skin. It cannot easily take possession of smooth-skinned fruits, such as Lane's Prince Albert Apple or Conference Pear, but it fastens on fruit with rougher skins, and has ruined many fine plantations of Cox's Orange Pippin Apple and Doyenné du Comice Pear. The usual remedy is a two-fold application of Bordeaux mixture, the first dose being applied when the flower-stalks become visible, and the second when the fruit is formed. A suitable strength is 12lb. of bluestone and 8lb. of quicklime to 100 gallons of water. The writer has found some benefit from the use of a caustic wash. He used V1 Fluid and a strong Bordeaux mixture of 50lb. of bluestone and 30lb. of quicklime to 100 gallons of water on alternate lines of the same varieties

of trees in winter, with the result that the trees washed with V1 Fluid were certainly more free from scab than the others. It would be most interesting and useful to hear the results of the experiments of others.—E. M. BLACKBURN.

Flowers Early in the Year.—The mildness of the season here and the absence of frost have brought quite a number of flowers out much earlier than usual, and among those noticed last week were *Cyclamen ibericum*, *Muscari azureum*, *Iris Tauri*, *Galanthus Whittallii*, *Eranthis hyemalis*, and (in a cold frame) *Iris Histrio* and *histrioides*; while such things as *Galanthus ciliatus*, *Jasminum nudiflorum* (a perfect picture this year), and *Iris stylosa* have been out for a month or more. Of the latter we have cut upwards of a thousand blooms from a row against a south wall about six yards long.—EAST SUSSEX.

Pear Backhouse Beurre.—In reference to an enquiry concerning this Pear in a recent issue of THE GARDEN, Messrs. James Backhouse and Son, Limited, York, write that this variety was the product of a graft of *Beurré Diel* upon a *Jargonelle*, made by the late Mr. James Backhouse over fifty years ago. In habit of growth it has much of the upright shoot of the *Jargonelle*, while the foliage has more the appearance of the *Beurré Diel*. The flavour is much more that of the *Jargonelle* than of the *Beurré Diel*, and it is very sweet and juicy. It is a true October Pear, coming in between the two kinds. From its large size, excellent quality and great productiveness and hardiness it can be thoroughly recommended for general cultivation.

Reinwardtia trigyna.—A bright feature in the warm greenhouse is furnished by this old-fashioned plant (it was introduced from India in 1799) in the warm greenhouse. It is fairly well known in gardens, but more frequently under the name of *Linum trigynum* than that of *Reinwardtia*, which is now regarded as the correct one. The plant in question is of a half-shrubby character, and bears small clusters of rich yellow flowers over an inch in diameter. It is naturally of a branching habit and flowers profusely. A second species, less known than the preceding, is *Reinwardtia tetragyna*, with pale yellow flowers. It is not so effective as the other. Both these plants are amenable to the same treatment. In summer they do best in a cold frame, as if grown in heat or where the atmosphere is at all dry they are liable to be attacked by red spider.—H. P.

Crowea saligna.—This pretty, hard-wooded plant flowers during the autumn and winter months; in fact, it is in the greenhouse still in full bloom. It forms a freely-branched shrub, whose rather long shoots are clothed with Willow-like leaves and studded for the greater part of their length with bright pink flowers about one and a-half inches in diameter. It is a native of New South Wales, has been introduced over a century, and in the days when hard-wooded plants were popular it was grown much more than it is now. Pretty little examples can be cultivated in 5-inch pots. A second species, from Western Australia, is known as *Crowea angustifolia*. In this both the leaves and flower segments are much narrower than those of *C. saligna*, while it principally blooms in the spring. *Crowea saligna* is sometimes known as *C. latifolia*. A mixture of peat and sand suits them well. It is very essential that the pots be well drained and the potting compost pressed down firmly.—T. H.

Onions During Dry Weather.—It seems somewhat remarkable that where many crops last summer were either a partial or complete failure, owing to drought, the Onion crop here should have been so good. The ground for the Onions in question was deeply trenched in early winter, and a liberal dressing of wood-ashes worked in (about three cartloads to six rods of ground) and no manure. The ground was forked over again later, made firm, and the seed sown early in March. As soon as the young seedlings appeared, the hoe was put through the rows, and also at frequent intervals all through their growth. This surface stirring is of the utmost importance. We thin to 6 inches apart. The soil here is very heavy, and Onions are usually inclined to make thick necks. Last season, however, suited them well, the tops seeming to help the bulbs in the dry weather. No bending over was necessary, the crop harvesting splendidly. The varieties grown were Rousham Park Hero and Bedfordshire Champion.—F. MARSHALL, *Willesden*.

Japanese Irises in an Amateur's Garden.—That which was just a narrow water-course 4 feet wide has been transformed into a pond, the home of many of the popular *Nymphæas*, while on the side Japanese Irises, planted in the autumn of 1910, are growing. The illustration shows the result after the second year of planting. This bank contains 200 clumps, and when in flower an exceedingly pretty effect is produced. The colours are various and well mixed. This Iris stands out as one of the most charming occupants of our modern gardens. The position chosen is very much exposed to the east, but they thrive splendidly. The preparation of the soil involved but little expense. Previously it was a mass of Rushes and rough grass; this we cut up into pieces with an old hay knife and placed it a good depth below the water, and I am happy to say we have seen nothing of it since. The soil at the bottom was nasty, sticky mud brought up from a depth of 4 feet. After trenching, the surface was covered with ashes from the fire; these were forked in and the whole left to dry for some weeks, after which a dry day was chosen for the planting. In the spring every clump showed signs of growth, and eventually all were covered with short manure, which was forked in.—W. D. POPE, *King Barrow, Wareham*.

Depth to Plant Fruit Trees.—An interesting demonstration as to how deep Apple or Pear trees worked on the Paradise or Quince stocks should be planted was presented to me in Messrs. Bunyard's Allington Nursery last autumn, when, with numerous others interested in fruit culture, including Messrs. Owen Thomas, G. Woodward and J. Willard, I visited that nursery and was shown a huge breadth, several acres in extent, of hush Apples, all worked on the Paradise, which had been planted some ten years. Better or

healthier trees carrying more superb crops of fruit no one ever saw, yet all these were originally planted low enough to enable the union to be buried. One reason for such deep planting is the belief, which may or may not be correct, that roots are emitted from the union direct from the stem of the grafted tree, and that through such agency additional strength is given to the tree. A further reason is that just burying the union in the soil not only serves to keep it cooler in the summer, thus facilitating swelling, but also provides some protection from sharp frosts in the winter. Soon after the late James Douglas went to reside at Great Bookham, he had a couple of dozen Apple trees on the Paradise stock and planted them. Some two years later he wrote to the nurseryman that the trees made no growth. On examination it was found that the trees were planted so shallow that the union stood 6 inches above

THE KITCHEN GARDEN.

EARLY BROAD BEANS FROM SPRING SOWINGS.

MANY amateurs and others do not care for the Broad Bean when there are plenty of other good vegetables later in summer; but early in the season this useful crop is appreciated when the pods are young and the Beans small and tender. The Early Green Pod, before it is fully matured, is little inferior to Green Peas, and the culture is quite simple. There are several forms of Green Pod Beans, and in my opinion the largest are by no means the best if quality is the first consideration. At the same time, even the longest pods of the largest varieties if cooked young are not to be despised.



JAPANESE IRISES IN MR. POPE'S GARDEN AT KING BARROW, WAREHAM.

the ground. He was advised not to lift the trees, but to have the stems moulded up with old pit soil above the junction. The result was remarkably robust, healthy growth and fruit. No doubt a great deal depends upon the character of the soil and the kind of stock on which a tree is grafted.—D.

FORTHCOMING EVENTS.

January 27.—Chester Paxton Society's Meeting. Lecture at 8 p.m. by Mr. J. D. Siddall on "Notes and Pictures of Summer Holidays from a Paxtonian Point of View." Illustrated by lantern slides.

February 1.—Linnean Society's Meeting.

February 3.—Société Française d'Horticulture de Londres Meeting.

February 5.—National Chrysanthemum Society's Annual Meeting at Carr's Restaurant, Strand, 7 p.m.

Many years ago it was, and in some gardens it is still, the rule to sow the Broad Bean late in the autumn for the first crop the following season; but the advisability or otherwise of this depends upon the soil and season. Frequently there are serious losses from such a course. Among the worst enemies the plant has to contend with are mice, which burrow under the plant and eat the succulent Bean or seed. I have in very severe weather lost the whole plant just above the ground-level, in spite of timely protection, so that under the circumstances there is no gain, but often loss of time. This last can be remedied by

Sowing in Pots and Boxes in January or early February, according to the locality, and planting out strong plants, say, some six weeks later, not forgetting to well earth them up at planting-time to protect the stems. I have found it beneficial to plant in a rather deep drill, as this protects the plant at the

start. Seed sown in small pots, three seeds in a 3-inch pot, plant out well, as it is not necessary to place any drainage in the pots other than coarse manure, and over this good loamy soil. This is useful where small quantities only are required. For larger supplies, shallow boxes answer well, care being taken that the seeds are not sown too closely together, each plant may then be lifted out for transplanting with a good ball of earth and roots. Sow in rather rich soil made firm, so that sturdy growth is secured at the start. After sowing, place the pots or boxes in frames or houses. One good watering will usually suffice till the plants are through the soil, when they should be placed near the glass and ventilated freely in favourable weather. When large enough, harden by exposure for planting. Few, if any, vegetables transplant better than Broad Beans.

Some Good Early Varieties.—There are numerous varieties of Early Green Longpods under diverse names, but most of them are suitable, and though some are termed large growers, I have not found them any too large. The old Green Longpod is a well-known early and prolific variety, and I prefer this to the smaller Early Mazagan and Beck's Dwarf Green Gem; but both of these should not be despised, as they are the earliest to mature and very hardy. I have grown other varieties, but the above are best for first supplies. G. WYTHES.

THE FLOWER GARDEN.

THE SPRING SNOWFLAKES.

SOME day the hybridiser will take in hand the Spring Snowflakes—varieties of *Leucojum vernum*—and will do for them what has been done for the Daffodils and the Snowdrops, and give us flowers of still greater refinement and beauty. This seems almost impossible when we study the innate grace and beauty of these Snowflakes; yet experience of what has been done with other flowers forbids the thought that they cannot be improved in any way, and encourages the belief that it may yet be done.

We need not, however, wait until that has been achieved, for these Snowflakes are lovely enough and useful enough to have a claim upon us which cannot be thrust aside, and calls loudly for their admission into the best gardens of the spring. Of greater wealth of beauty than the Snowdrop, they have yet its purity and almost all its grace, while their equal reliability in our gardens lends strength to their appeals to us. They are ever growing in favour, and the time will come when every spring garden will have many of these flowers among its best-admired treasures. Yet there are many who do not know these charming flowers, and these would act wisely were they to order from their bulb-dealer at least a few of the Snowflakes in the autumn.

While all the Spring Snowflakes belong to one species in the eyes of botanists, and are varieties of *Leucojum vernum*, there are three well-marked forms, as well as a few with minor variations, not worth mentioning from a gardening standpoint. These three, however, are sufficiently distinct to be worth owning in every garden. The first of these to bloom is that which botanists tell us is a variety of *Leucojum vernum*, called *L. vernum Wagneri*. This, Wagner's Snowflake, is a very fine form, coming at least a fortnight, and sometimes a month, before the others. It is often in bloom

early in February, and sometimes anticipates that time. It is taller than the others, and the great majority of the plants bear two flowers on one stem. These flowers are larger, and have the beautiful green spots at the apex of each segment of a deeper colour than the others. This I consider the finest of the Spring Snowflakes. It is sometimes sold as *L. carpathicum*, so that those seeking it should stipulate for obtaining the robust, early-flowered, twin-bloomed form.

The typical *Leucojum* is in itself a lovely flower, with its white satin-like blooms of a fine, broad, bell shape, each segment having the characteristic green spot on the exterior, which adds so much beauty to the bloom. It varies slightly in depth of green, but is a feature of great attraction in every way. Growing a little more than 6 inches high in some soils, this plant becomes a foot or so in height in others.

The third variety I shall mention now is one with yellow instead of green spots. This is a charming little plant, and, much as we admire the green markings of the type and think that it cannot be surpassed in charm, we also appreciate the yellow markings and the yellow ovaries of this one, which is the true *Leucojum carpathicum* of Herbert. It is a dainty little plant, hardly so robust as the one with green spots, but a great beauty withal.

The cultivation of these Spring Snowflakes presents no difficulty. They grow well in almost any soil, preferring possibly one of a rather good loam and sand. They thrive in sun or partial shade, and when they become more plentiful will rival the Snowdrop for planting in great masses for a good garden effect. They make finer and more vigorous plants if rather deeply planted, say, from 4 inches to 6 inches or 8 inches deep; the lighter the soil, the deeper the planting required. The bulbs are comparatively cheap, and as they increase freely from offsets, they soon form a nice feature in any garden or grounds. The bulbs should be as short a time out of the soil as possible, and are purchased and planted in autumn.

Dumfries.

S. ARNOTT.

THE BRODIEA AND ITS CULTIVATION.

I READ with much interest the Rev. Canon Bernard's article, "Our Garden Flowers in California," which appeared in THE GARDEN some months ago. I was specially interested in the news that a complete flora of California is in course of preparation. An authoritative work on the whole of that part of America which lies west of the mountains is badly wanted.

It seems that the genus *Brodiea* has not yet emerged from a state approaching chaos. It is still confused with the genera *Calliphora*, *Triteleia* and *Milla*, and individual species have vexatious synonyms. *Brevoortia coccinea* is down in every florist's catalogue I have come across under *Brodiea*. Dr. J. C. Willis, in "Flowering Plants and Ferns," mentions thirty species, evidently including the genera mentioned above, but not *Brevoortia*. A small collection obtained from Messrs. Barr in the autumn of 1910 gave an insight to the beauty of these liliaceous plants, although my experiment resulted in partial failure. I was especially struck with the non-fugitive character of the blossoms, cut sprays lasting in water for a fortnight.

My plants of *B. congesta*, *B. ixioides* and *B. hyacintha* were lost through slugs, and as the plants apparently only make two leaves, the mischief was not long in the doing. Several leaves which

survived shrivelled away, but the same fate overtook some of the plants of *B. multiflora*, which ultimately threw up fine heads of flowers. *B. multiflora* was in blossom on May 21, and I had a nice clump of these compact umbels of waxy lilac flowers. The beauty of *B. laxa* was a revelation, the delicately poised campanulate blossoms lasting so long in condition. This began to bloom on May 28.

B. murrayana was in bloom on June 22. Robinson ("English Flower Garden," second edition) mentions this as a variety and an improvement on the type *laxa*. In my hands it was not so; the plants were stumpy in comparison and the darker colour of the blossoms less pleasing. *Brevoortia coccinea*, sent as a *Brodiea*, towered above the others with its curious crimson and green flowers, the tips of the reflexed lobes showing creamy white.

They were all planted in sandy soil under a south wall, but in this warm corner of Devon they seem to want a soil of some stability, but well drained.

STANLEY CHIPPERFIELD.

Ottery St. Mary, Devon.

A BEAUTIFUL LILY.

LILIUM AURATUM RUBRO-VITTATUM, which is one of the most striking of all the varieties of the Golden-rayed Lily, is being sent now in considerable numbers from Japan. The bulbs are, as a rule, smaller than those of the ordinary *L. auratum*, but they travel well, and in most cases can be depended upon to flower in a satisfactory manner. This variety is now fairly well known, hence it will suffice to mention that the golden band down the middle of each segment, which forms such a notable feature of the typical kind, is here replaced by a bright crimson one. On first expansion the colour is intense, but should the weather be very hot at the time, it changes to more of a brown paper hue. It is, however, exceedingly beautiful when fresh, and bulbs are now sold at a fairly cheap rate. A companion variety, which, however, appears to be getting scarcer of late, is *Wittei*, of a clear unspotted white, with a central stripe of yellow. It is also known as *virginale*. H. P.

PHLOX DIVARICATA AND ITS VARIETIES.

THE type of this beautiful Phlox has been grown in gardens for over one hundred and fifty years. It grows from 1 foot to 15 inches high, and is well worth a prominent place in the front of a border or in the rock garden. Very free-flowering, as evidenced by the illustration on page 45, it is effective in April and May with large pale blue flowers, the petals of which are notched at the apex. There is another form in cultivation which goes under the name of *P. canadensis*, which has somewhat smaller but darker-coloured blue lilac flowers. Beyond colour, however, there is no difference between the two.

A few years ago another variety of this Phlox was introduced by Mr. Amos Perry, and was called *P. divaricata Perry's variety*. Its correct name, however, is *P. d. Laphamii*, and its distinctive character is that the petals are rounded or entire at the apex, and not notched as in the type. It is more robust and taller-growing, very free-flowering and in all respects a great improvement on the others. There is also a variety with almost white flowers.

Like many other members of this family, *P. divaricata* and its varieties fully appreciate a

rich and deeply-cultivated soil, but it is not particular as to position as long as there is plenty of vegetable humus in the soil. It is found growing naturally in damp woods in North America. W. I.

THE ROSE GARDEN.

ROSES AND CLEMATISES ON FENCES.

THESE two beautiful subjects run well together, and the Clematises provide shades of colour not found among the Roses. The same preparation of soil required for the Rose also suits the Clematis, so that if the border be well prepared, luxuriant growth follows. I would advise a fence made with rustic wood, the pieces being placed rather close together. Such a fence would screen off the Rose garden very effectually, and act as a shelter at the same time. I think the better class climbers, such as Mme. Alfred Carrière, Dr. Rouges and W. A. Richardson, would be more suitable than the ramblers, although such as Tausendschön would be admissible. Then the Clematises could include such well-known sorts as Jackmanii, Lady C. Neville, Mrs. George Jackman, Star of India, Gipsy Queen, Nelly Moser, Marcel Moser, William Kennett and Henryii. If possible, procure the Clematises from a source where they are grown on the cool system. There has been quite a disease among Clematises this last decade, and most authorities are agreed that it is brought on by the forcing process in rearing the plants. If they can be procured on their own roots, so much the better. As to pruning, this need present no difficulty. The Clematises will require but little, and the Roses can have the old wood removed with Clematis growths attached without doing serious injury to the latter.

ROSA WICHURAIANA AND ITS FRUITS IN WINTER.

THE fruit which at the time of writing (January 16) makes this beautiful Rose so conspicuous is no mean feature. Procumbent though its nature is, yet when tied up to a 5-foot pole the pendulous growths, adorned with the large clusters of its bright seed-pods, are almost as showy as those of *Cratægus Pyracantha*. It is a species with quite a history, and most readers know that to it we owe the numerous group of wichuraiana Roses, of which the well-known Dorothy Perkins and Alberic Barbier are representatives. Authorities differ as to the correct naming of this particular species. Some say it should be *R. Luciae*, others *R. wichuraiana*. I believe the Kew authorities say there are two distinct species, but that they have no plant of "*R. Luciae* apart from *R. wichuraiana*." I am afraid the name has now become too familiarised to allow of any alteration, even supposing *R. Luciae* does eventually prove to be the correct name.

How strange that the species should have been known some twenty years before the hybridist took it in hand! This compels one to believe

there are other species capable of being worked upon in a similar manner, with probably equally startling results. It was left to an American gentleman, Mr. A. W. Manda of Harvard Botanic Gardens, to give us the first crosses in Jersey Beauty, Gardenia and some others, and he was soon followed by M. Barbier in France, Mr. Walsh in America, and some other hybridisers, including Messrs. Paul and Son of Cheshunt, these latter gentlemen evolving quite a distinct break in their dwarf perpetual-flowering wichuraiana Teas, obtained by crossing Tea Roses with wichuraianas.

I am sanguine enough to think that even other types will yet be obtained, probably the long-desired perpetual-flowering Rambler, through crossing climbing Tea Roses with wichuraianas. It is to be hoped, too, that the desirable quality of evergreen foliage will not be overlooked, for the next best thing to seeing an arch or pergola of bloom till late in the year is to see one with glossy foliage well through the winter, and this, so far,



PHLOX DIVARICATA GROWING ON A BANK.

is wanting, except in two or three, such as Jersey Beauty and Edmond Proust. I really think there is some wichuraiana blood in American Pillar, for it has not only the procumbent instinct, but its foliage is glossy and well maintained throughout the winter. This and the old variety Aimée Vibert are two of the most evergreen in my collection.

I think, perhaps, it might be a good plan to cross some of our perpetual-flowering, dwarf-growing Polyantha Roses, such as Perle d'Or and Canarienvogel, with the wichuraiana types in order to obtain perpetual-flowering wichuraianas bearing large clusters of flowers. Most of the sorts that flower a second time produce their blooms in twos and threes, and are not very effective. Others that yield clusters are not very rampant, these being obtained, I imagine, from Herr Peter Lambert's beautiful perpetual-flowering Rose Trier, which is grand in its way, but not suitable for an arch or pergola.

THE GREENHOUSE.

SEASONABLE NOTES ON AURICULAS.

WHY are Auriculas banned from the majority of amateurs' gardens? It is well within the bounds of possibility that some enthusiastic cultivator will retort by affirming that the question is wholly beside the mark, for the reason that they are not banned; but it will take much to convince me of the truth of that statement. I am of opinion, and have been for several years, that Auriculas are neglected, and I am anxious to learn the reason. In the two groups—show and alpine—are to be found some of the most refined and exquisite of flowers, and the plants are so exceedingly accommodating that they can be as successfully grown in the smokiest town as in the cleanest country garden. There was a time within my memory

when they were far more frequently seen, and as much pleasure was found in their possession as is now apparent in that of the Sweet Pea; but it is not the case to-day, and I think that the fact is to be regretted. Whether the National Auricula and Primula Society could do more than it is doing at present to restore the plant to the popularity which it erstwhile enjoyed, and to which it is entitled, is not for me to say; but I do know that save for the annual exhibition and the general meeting one hears little about it. However, if others will not do their part, the Editor of THE GARDEN will do his, and it is intended to publish at intervals brief notes on the plant, in the hope that they will encourage its extended culture.

Plants in Frames.—Although the Auricula is a hardy plant, the wisdom of keeping plants in frames or cool greenhouses, the former for preference, throughout the winter at least, cannot be doubted. One has then complete control over the amount of water that will reach the roots,

and this is an important point, for more harm will follow excessive wetness than severe frost. To all intents and purposes the soil in the pots should be dry in frosty weather, but this ought not to be carried to the point of dustiness; therefore, prior to that condition prevailing, water must be given. Light is essential to perfect health, and for that reason the glass of the structure in which the plants are growing should be kept scrupulously clean. Accumulations of moss on the surface of the soil in the pots are not desirable, as they prevent the admission of fresh air. When they are seen, scrape them away with the haft of the budding-knife or a flat piece of wood.

Seed-Sowing.—Those who desire to raise a stock of plants from seeds cannot do better than make a start towards the end of February, and between now and then the seeds should be purchased from a source of the highest repute. Collections of both show and alpine varieties can be thus started; but when the novice has come to appreciate the charms of the flowers, he will see the necessity for buying plants of the finest sorts with which to form the nucleus of a splendid set. At the outset it may be well to remind readers of the irregularity of germination which characterises the *Primula* family. Having this fact in view will impress the importance of thin sowing, because this will facilitate the removal of the seedlings from the pots without disturbing seeds which have not started. A distance of not less than 2 inches ought to be allowed from seed to seed, and if a little more space can be provided, so much the better. The pots for seedlings must be abundantly drained, and the compost of loam, leaf-mould and sand should be moderately firm and quite level on the surface. Covering in may be to a depth of an eighth of an inch or so, and the soil must be kept moist by the dipping of the pot and not by overhead watering. After sowing, the pots—these are preferable to pans for *Auriculas*—may be stood in any convenient position in the greenhouse or frame, and in no circumstances is it wise to try to rush the seeds or seedlings along, as steady, natural progress brings the greatest satisfaction.

THE GREENHOUSE WINTER SWEET.

(*ACOKANTHERA SPECTABILIS*.)

AMONG the number of plants that require the conditions of a warm greenhouse, there are probably few more useful or worthy of cultivation than this *Acokanthera*. Besides being among the easiest of plants to manage, it also has the good properties of forming a handsome evergreen shrub of a compact, bushy habit, which produces its flowers during the winter and early spring months. The pure white, deliciously fragrant flowers are freely

produced in axillary corymbs towards the end of the branches, thus often forming a dense spray upwards of a foot in length.

A. spectabilis is a native of South Africa, and, like many other plants from that country, will not thrive when treated strictly as a greenhouse plant; but given the conditions of an intermediate house with a minimum temperature of 50° in winter, it will flourish and produce quantities of its beautiful *Ixora*-like flowers. Cuttings of the firm, young shoots root readily when inserted in sandy soil during April and May; they require to be placed in a propagating-case with bottom-heat. As the young plants are disposed to grow up somewhat



FLOWERING SPRAY OF THE GREENHOUSE WINTER SWEET
(*ACOKANTHERA SPECTABILIS*.)

thin, attention must be given to stopping; this will ensure obtaining a well-balanced plant. Large specimens can be grown in 12-inch pots, using a compost consisting of equal parts of rich loam, peat and leaf-soil, to which a good proportion of coarse sand should be added. In gardens this plant is occasionally met with under the name of *Toxicophlœa spectabilis*.

Owing to the fragrance of its flowers it is also sometimes called the Greenhouse Winter Sweet. For this feature alone the plant is well worth growing where a suitable temperature can be provided, and its season of flowering is a further inducement to many to undertake its cultivation.

In a cut state the flowers would be delightful in a living-room, a few sprays being ample for a room of ordinary dimensions.

TREES AND SHRUBS.

INTERESTING SHRUBS IN SEASON.

Hamamelis mollis.—Your correspondent in the issue for December 30, 1911, has already referred to the merits of this charming shrub, and left but little for me to say, did I wish to, in regard to its charms. My reason for alluding to it is because of the apparently unusual lateness in flowering of our plant. It is represented here by a very fair specimen 5 feet or more in height and 3 feet to 4 feet through, and when in flower is a perfect picture. At the time of writing, however (January 12), the earliest flowers are just expanding, which seems contrary to expectations after such an unusually hot season last year. The growth is well set with flower-buds and promises well, but in 1910 it was almost in full flower at Christmas. What is the behaviour of others?

Parrotia persica.—Belonging to the same Order as the above, but not quite so showy, this plant is, nevertheless, one of the most interesting objects now to be found in the shrubbery. Here we have several specimens which take the form of standard trees, though it may be seen in the form of a pendent bush, and also makes a desirable subject for a wall. This subject is certainly flowering earlier, and the woolly buds in many cases have already revealed the crimson stamens, which are quickly detected when caught by the sunlight. Its chief attraction, however, is its beautifully-coloured autumn foliage.

Lonicera Standishii.—Though not showy, the small flowers of this Honeysuckle are delightfully fragrant, and are certainly welcome at this early date. The shrub is quite hardy. Another variety named *L. Standishii lancifolia*, one of Mr. Wilson's introductions, is also flowering, and resembles the type except for the lanceolate leaves, which are quite distinct.

Chimonanthus fragrans.—Though this winter-blooming shrub, with its exquisitely sweet-

scented flowers, is best accommodated with a wall, it is flowering well as a bush plant in the shrubberies and in our cold clayey soil. To improve the shape and also to promote flowering wood for another season, prune as soon as possible after the flowers are past.

Garrya elliptica.—As an evergreen for a wall, few shrubs can outvie this plant. Especially interesting just now are the male catkins with their pale green Hose-in-hose, as it were, individual flowers.

In some gardens it does very well as a shrub in the open, and when it can be grown in this way makes a very handsome specimen indeed. It is not exactly a showy plant, but is particularly pleasing owing to its graceful appearance.

Elstræ.

EDWIN BECKETT.

HARDY AZALEAS FOR SPRING EFFECT.

Of the various floral sights in a garden, a bed of the Ghent or American Azaleas is hard to beat, yet such sights are comparatively rare. The accompanying illustration shows a bed of these plants growing in a Highgate garden. These were planted eight years ago this February. Except once—two years ago last flowering-time—they have been a perfect picture each year. Their richly-coloured flowers easily demand attention, especially when seen in large masses.

These delightful plants are not difficult to manage if, at the outset, suitable conditions are provided for them. Where there is a fair depth of fibrous or loamy soil present—say, 18 inches to 2 feet—the preparation will not be heavy work, as it will only be necessary to add some coarse sand. Some growers advise peat or leaf-mould, but this is quite unnecessary if the soil is as described

The larger spaces between the Azaleas can, for the first two or three years, be filled with summer-flowering plants, such as Lilliums, Montbretias or Canterbury Bells.

Ken View Gardens, Highgate, N. C. TURNER.

THE ROCK AND WATER GARDEN.

HOW TO MAKE A MORAINÉ GARDEN.

RECENTLY considerable attention has been given to that adjunct of the rock garden, the moraine; and where it is possible to devote the space (if only a square yard or two) in some fully-exposed position it would, I think, be well to proceed without delay to make the necessary alteration. The three main

not only supplies copious volumes of ice-cold water to the little plants, but carries away all the finer parts of the broken stone and so greatly adds to the rapidity of drainage. When the falling temperature causes growth to cease, the water supply is automatically cut off by the freezing up of the glacier, usually accompanied by heavy falls of dry snow, which effectually protect the plants from any sudden change of temperature, should it occur, while the considerable time it takes for this snow blanket to melt through and expose the plants in the following spring ensures that they come forth into a year so far advanced that the likelihood of a check is improbable. Often June is well advanced before these high mountaineers see the sunlight after their long winter sleep. With some care and thought we can do a great deal to minimise the widely different conditions which prevail in our gardens from those existing in the Alpine regions. When one's garden is situated upon a comparatively



A BED OF HARDY AZALEAS, WITH A BACKGROUND OF TREES, IN A HIGHGATE GARDEN.

above. Where, however, the soil of the chosen site is heavy and sticky, it must be trenched 2 feet deep and a liberal amount of leaf-mould and common fibrous peat added, also a greater portion of sand.

Planting may be done from October onwards until spring. The bed, an oval one, was 26 feet long and 13 feet wide at the centre. This year the bed is being enlarged and the bushes replanted at greater distances apart. In very dry seasons see that the plants do not lack water when making growth, and if a mulching of cow-manure be given during August or early September they will be greatly benefited.

factors to bear in mind in this connection are (1) ample provision for the sharpest possible drainage; (2) a copious supply of water during the growing season; (3) some provision to ensure the utmost dryness of the crowns of the plants during the winter, coupled with comparative dryness of the moraine soil during that time.

It is easy to understand how our little mountain friends obtain these conditions in their alpine homes. The heaps of stone detritus which accumulate at the foot of a glacier, often piled up at an acute angle, ensure ample drainage, while the continuous melting of the ice and snow on the slopes above during the warm or growing season

retentive soil—and I suppose but few of us are favoured with a coarse gravel or rock subsoil—the best way to proceed in making a moraine is, from my own experience, as follows:

Position for the Moraine.—Having decided upon the position, which must be an open one, and preferably where the rock garden slopes gently up, dig into this mound so as to form a trough about two feet deep, and with the bottom falling gently to one point, say, in the front. Either brick up the sides of this compartment or build up with stone or concrete, so as to make this "dish" watertight to at least 8 inches from the bottom. At the lowest point of the bottom an

outlet should be arranged which can be easily opened or closed from the outside. It will be readily seen that if this bottom valve is closed and water allowed to enter the compartment, it will rise to the depth of 6 inches in the front (and something less at the back, owing to the slope of the bottom), while if the valve is opened, no water whatever will remain in it. Care should be taken to carefully guard the inner side of the valve, say, with perforated zinc, or, better still, perforated brass. The next thing to do is to put in about five inches or six inches of broken stone or brick of about the size of an Orange, and on this a layer, 2 inches thick, of stones, just large enough to roughly cover over the interspaces between the lower "rough stuff," and so prevent finer soil from choking up the drainage.

The Best Soil.—Upon this intermediate layer the moraine soil proper should be laid, of sufficient thickness to entirely fill the moraine, and should consist preferably of sandstone chips put through a half-inch or three-quarter-inch mesh sieve for the lower part and a quarter-inch mesh sieve for the upper. If there are fine particles in this, as there probably will be, it is advisable to put the whole through an eighth of an inch mesh sieve to get rid of the dust, which so readily clogs the drainage. Just a suspicion of well-decayed leaf-soil may be added to the top 6 inches, say, one part to fifteen of stone chips. If the boundary walls of the moraine have been arranged in an irregular outline and have been topped with decorative pieces of stone, the whole should resemble any other part of the rock garden, except that the contents of it are more stony than the rest. Similar pieces of stone can also be inserted just into the surface of the moraine to break the otherwise flat expanse, and among these the plants will nestle.

The Water Supply.—If water is now allowed to enter the moraine from some diverted trickle which may already decorate the rock garden, or, if not, is supplied by hand every day or so, fresh water will be more or less constantly passing beneath the roots of the plants contained therein and overflowing at the 6-inch level, and during the growing season this should be the condition of things. When the autumn is with us, the water supply may be cut off, and about the end of October or early November, dependent upon the kind of weather at the moment, the lower valve should be opened and left so until spring returns. It is a good plan, where possible, to let the overflow from the moraine trickle down to supply our bog-hed, and thence away or into any little pool we may have. To protect the crowns of the plants from overhead wet, or the dirt brought down by fogs, a very simple contrivance of three pieces of bent wire so placed as to support a sheet of glass some 4 inches or 5 inches above each clump serves admirably, and, if occasionally cleaned, admits both light and air and so does not "coddle" the plants at all. The glass should be slightly tilted to allow the rain to drip off clear of the plant itself. A very fair substitute for broken sandstone is broken brick, but any old mortar adhering thereto should be taken off if it is proposed to grow lime-hating plants.

The Best Plants for a Moraine.—Upon a moraine so constructed such plants as the following will thrive to a much greater extent than they usually do in the rock garden proper: *Æthionema coridifolium*, *Androsace Laggeri*, *Anemone vernalis*, *A. narcissiflora*, *Arenaria balearica*, *Campanula Allionii*, *C. alpina*, *C. cenisia*, *C. morettiana*, *C. pulla*, *C. Zoysii*, *C. excisa*, *Dianthus glacialis*, *D. alpinus*, *Draba pyrenaica*, *D. aizoides* and varieties, *Geum reptans*, *Gypsophila cerastioides*, *Houstonia cærulea*, *Linaria alpina*, *Lychnis alpina*, *Papaver alpinum*, *Primula integrifolia*, *P. glutinosa*, *P. viscosa*, *P. minima*, *Ranunculus glacialis*, *R. alpestris*, *R. parnassifolius*, *Saxifraga aizoides*, *S. Aizoon*, *S. oppositifolia*, *Douglasia vitaliana*, *Wahlenbergia divaricata*, *Silene acaulis* and varieties, *Thlaspi rotundifolium*, *Viola biflora* and *V. cornuta*.

REGINALD A. MALBY.

THE MEADOW SAFFRONS OF SPRING.

WE are most familiar with the Meadow Saffrons of autumn, which make such handsome ornaments for the decoration of the garden at a season when other dwarf bulbous plants are practically absent from them, and when we enjoy all the more their cups of purple or white. It is only within recent years that the few spring

A spring-flowering Meadow Saffron which occupies a practically unique position in respect to its possession of yellow flowers is that called *Colchicum luteum*. This species, which is said to be a native of Afghanistan, Baluchistan and other Himalayan quarters, is not proving so satisfactory as we would like, and we may probably have to wait for the introduction of a stock from its coldest habitats to find it really satisfactory in this country, although some have succeeded with it. It sometimes flowers in midwinter, but is usually considerably later. Its flowers are of a nice shade of yellow, but as regards effect it is far behind the yellow Crocus of spring.

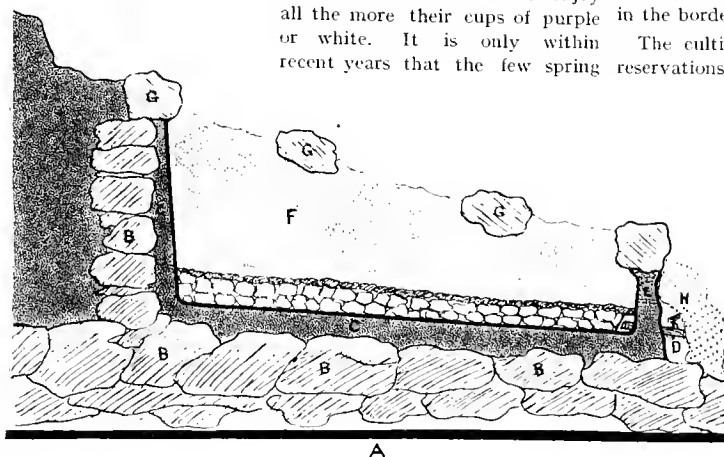
One of our latest additions to the spring garden of bulbs is *Colchicum hydrophilum*, which likes a moist place and is generally a satisfactory plant in the garden. The writer has not found that it increases freely, but it is a pleasing Meadow Saffron with sweetly-scented flowers in winter and spring. They are of a kind of reddish pink. Under the name of *C. libanoticum* we have what appears to be a variety of *Colchicum montanum*, a variable species, flowering in spring also. It is a neat little plant with flowers of a kind of purple rose and white, and thrives well on the rockery or in the border.

The cultivation of these Colchicums, with the reservations already mentioned respecting the fondness of the slug for one and a preference for moisture with another species, is easy in ordinary soil, although they generally prefer one of a heavy kind. Most, or all, are suitable for bays in the rock garden.

Corms are secured in autumn and planted with the crown about 2 inches beneath the surface. Some dealers may be able to supply them in pots at this season.

Dumfries.

S. ARNOTT.



SECTION SHOWING CONSTRUCTION OF A SMALL MORAINÉ GARDEN.

A, horizontal line; B, hard-core foundation; C, cement concrete, draining towards outlet; D, winter outlet with perforated zinc cover; E, 8-inch overflow; F, moraine soil, upon small then large rubble for drainage; G, decorative stones; H, stone hiding top of winter outlet.

species which are available at the present time have attracted a little notice from the lover of bulbs, and they are not yet generally known. They are pretty and useful flowers, though their value is lessened by the fact that at this season we have a number of charming Crocuses at the command of those who like flowers of this class.

Yet those who welcome a variety might do worse than introduce a few of these spring Colchicums or Meadow Saffrons to their gardens. They have beauty of their own, and they give the change which is so acceptable to many cultivators of flowers. One of the Spring Meadow Saffrons which has been for some time in cultivation is *Colchicum crociflorum*, a dainty little plant having pretty small flowers of white, striped outside with deep purple, and sharp-pointed foliage. It is a dwarf plant, flowering in earliest spring, in fact, often before January passes away, although this depends much on the season and the position. Its chief enemy is the slug, which will frequently destroy the flowers and eat the foliage, thus weakening the corm or bulb for another season. It is, however, a dainty little flower.

to be met with. It is very scarce—rare, indeed—although a plant was found growing in a Cheshire garden some years ago. It has been kept pretty closely in a few hands, and is one of the most pleasing of the double varieties of the common Snowdrop. It must be clearly understood that the flowers are mainly white, and that the term "yellow," as applied to Snowdrops at present, means that the usual green markings are metamorphosed into yellow.

In the double one these yellow markings look extremely pretty when we examine the flowers. The stems, spathes, seed-capsules and other parts, generally yellow in the single "yellow" varieties, are green in this one, and the golden coloration is confined to the interior markings. It is, however, a lovely Snowdrop, and it is only those who know it who can realise the beauty of the combination of purest white and yellow which characterises the flower, which, when it becomes better known, will be a great favourite with many.

A. M. D.

THE DOUBLE YELLOW SNOWDROP.

GARDENING FOR BEGINNERS.

HOW TO GROW ORCHIDS UPON RAFTS.

THE majority of Orchids thrive best when cultivated in ordinary flower-pots or pans, but there are quite a number that only succeed if grown upon what is usually termed a raft.

They embrace all those species possessing a climbing habit, such as *Oncidium flexuosum*, *Angræcums infundibulare*, *eichlerianum*, *imbricatum*, *Aerides Vandarum* and *Broughtonia sanguinea*, while others will occur to the mind of the observant cultivator.

The raft is made of Cork or some other durable material, such as a piece of Apple wood, which should be split down the centre, removing all side shoots, and it ought to be 1 foot or so in length (slightly longer than the plant, to allow for further development) and from 3 inches to 4 inches wide. A layer of compost is then placed on the flat side and made secure with fine copper wire, when it is ready for the plant, as illustrated in Fig. 1. The soil consists of *Osmunda* fibre, peat and sphagnum moss in equal parts, and after it is wired to the raft all loose particles may be clipped off with a pair of sharp scissors or shears.

Having chosen a specimen that requires attention, it is carefully removed, picking out the

decayed soil with a pointed stick, and cutting away all dead roots and the leafless part of the stem. It is then placed on the new compost, but must be made quite firm with a piece of raffia at occasional intervals, when roots will soon penetrate the soil and become attached to the raft. There are two ways of growing Orchids when arranged on a raft—they may either have a wire fastened to the top and be suspended from the roof, or the base of the raft and plant may be put in a flower-pot, as shown in Fig. 2, being made secure there with potsherds and the usual rooting medium, while it is advisable for the top of the raft to lean over at a slight angle. This is a very good method, because all plants grown on rafts, especially if suspended, are apt to get extremely dry during the summer months; but by adopting the course described and illustrated on this page the danger of becoming excessively dry is considerably reduced. It will be found that more water will be necessary than for plants growing in the ordinary way; but if lightly sprayed overhead occasionally and the top part of the raft dipped whenever it becomes dry, the Orchid will thrive and produce its flowers in due season. S.

HOW TO TREAT BULBS IN FRAMES.

At the present time there are many thousands of pots of bulbs, chiefly of Hyacinths, Tulips and Narcissi, being removed from their coverings of ashes, soil or sand and placed in frames. Not all, of course, are grown for exhibition; but I will give a few hints on the treatment of bulbs intended for exhibiting, and such hints may be applied to those for greenhouse or conservatory decoration also. I have put my bulbs in frames, and always place empty inverted pots over them prior to covering all with ashes or soil. All cultivators do not so treat them, but bury the potted bulbs with soil or ashes solely. In any case, it is advisable to place empty inverted pots on the bulbs directly they are taken to the frames, and, in addition, to cover the lights with mats. When empty pots are put over Hyacinths, no loose covering material can reach and cause the growing spikes any injury. Both the leaves and the growing spike are kept quite clean, a very important point in the management.

Of course, the leaves, as well as the spikes of bloom, are quite white when taken from the ashes, and sudden and full exposure to the light would be bad for them. The exposure must be very gradual. All growth will not be equally advanced when the bulbs are put in the frame, and I advise the inexperienced to cover backward Tulips with clean sand 1 inch deep, this in addition to the inverted pot. At the end of a week or ten days remove the crock placed over the hole of the empty pot. When another week has passed, take off the empty pot entirely, but still retain the mats on the glass. At this stage ventilate the frame a little night and day, except in frosty weather. When the Tulips have grown through the sand, carefully shake off the latter. At this stage the bulbs will be making headway nicely, and the mats must be removed before the leaves and flower-stems are unduly drawn up; but it is chiefly

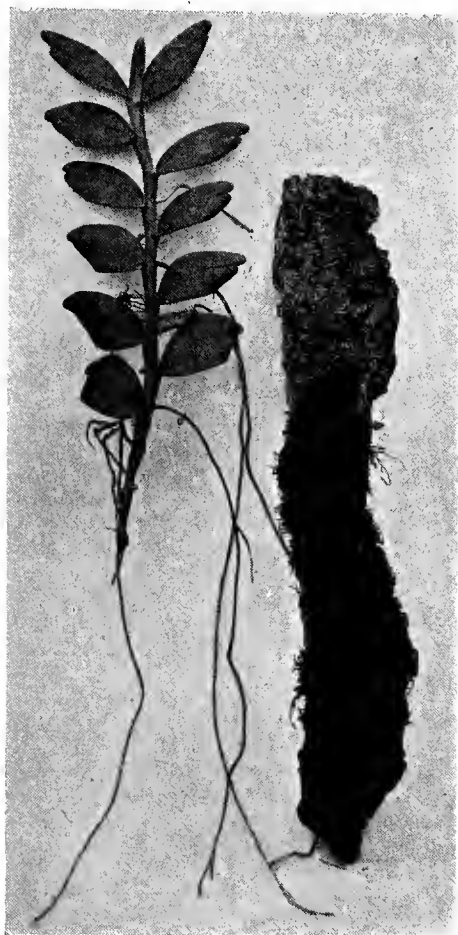


THE SAME PLANT FIXED TO THE RAFT AND PLACED IN A POT. THE SCISSORS AND POINTED STICK ARE USED IN THE WORK.

owing to premature exposure to light and air that Tulips and Hyacinths are often to be seen with short, stumpy leaves and squat spikes of bloom. They must be drawn up somewhat, and then the feeding should commence if there are plenty of roots. Weak manure and soot water, respectively, should be used alternately for a time, and then only the former, and the best way to apply both is to half fill saucers and stand the bulb pots in them for a whole night at a time once every fortnight. Never allow the roots to get very dry, and extra fine flowers will result. SHAMROCK.

HINTS ON ORDERING SEEDS.

BEGINNERS and amateurs generally would save seedsmen a great deal of anxiety and work, as well as ensuring prompt despatch of their seeds, if they would always make a point of using the printed order form issued with most seed catalogues. This is usually numbered or arranged alphabetically, and its use greatly facilitates the putting up of orders. Some trouble should also be taken to write the name and address to which the seeds are to be sent as plainly as possible.



PORTION OF EPIDENDRUM SUITABLE FOR FIXING TO THE RAFT SHOWN ON THE RIGHT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Lawns.—Unless the ground is in a very wet state, give these a good brushing and rolling weekly. These, in my opinion, are the best means of ridding the surface of worm-casts, as well as being invigorating.

Walks and Drives.—Any re-surfacing that may be required in this direction should be done without delay. However large or small the garden, walks or drives should always be provided with suitable drains or catch-pits to take surface water. See that the latter are cleaned out periodically, and take advantage of showery weather for rolling.

The Shrubbery.—Any replanting that may be necessary should be done without delay, that is, with the exception of Hollies and evergreens, which are better transplanted in April. Break up the bottom of the holes, and have them sufficiently large so that the roots are not cramped. Coarse and damaged roots should be cut back in the same manner as for fruit trees. Lay the roots out evenly and make the soil firm as the work proceeds.

Pruning Shrubs.—The amount of pruning necessary and when best performed are governed principally by the habit and the manner of flowering of the particular subject in question. Generally speaking, those that flower on newly-made young growth are best pruned in the spring when growth is just commencing, while those that flower on the current year's growth should be pruned immediately after flowering. Many shrubs merely require the dead growth to be removed and an occasional check when getting too large.

Herbaceous Borders.—Strong-growing subjects that are encroaching too much are best split up, and this is best done by inserting two forks back to back and opening out the handles. This is far preferable to chopping with a spade. Always select the most vigorous pieces of growth, which are usually found on the outer side of the clump.

Violets in Frames.—To maintain the plants in a healthy condition, these must receive plenty of light and air. Except when frosty, always allow a free circulation of air, and on mild days remove the lights entirely. Water the plants if necessary, pick off yellow and other decayed leaves, and aerate the soil. Protect well at night when the weather is cold.

Aquilegias.—These, especially the long-spurred varieties, make excellent pot plants for the greenhouse if potted now and placed in a cold frame for a few weeks; afterwards grow in a little warmth.

Kitchen Garden.—The work in this department will continue to increase daily. The earliest Green Peas are undoubtedly best raised in small pots, where they are safe, or nearly so, from the ravages of birds, mice and slugs. Sow the seeds thinly in fine soil, give a watering in, and stand on an ash bottom in a cold frame. Give plenty of air whenever the weather permits. Boxes may also be utilised if preferred to pots. Place the seeds 2 inches apart each way.

Potatoes.—The earliest supplies in frames may now be started, and before planting place the seed Potatoes on shallow boxes or trays in a light position, free from frost, to sprout. Plant in a light, open soil, just covering the tubers. Well cover the frames at night, and as soon as growth appears draw a little soil around the plants.

Carrots.—Young Carrots are a great delicacy, and may be obtained quite easily where a frame upon a mild hotbed can be secured. An excellent plan is to sow the Carrots in drills 6 inches apart, and then, broadcast, a thin sowing of Radishes. The latter germinate quickly, and are cleared before the Carrots attain any size. Select a variety of Carrot of the Stump-rooted type.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Muscet Vines.—The viney to produce ripe fruit in early autumn must now be kept shut, in order to have the buds ready to break by the beginning of March. If infested last year with any of the noxious insects which appreciate living on the Vine, the rods should be again washed with very hot soapy water and afterwards painted with a mixture of tar, one part, and clay, nine parts.

Mushrooms.—One has to be very careful in applying fire-heat, which has a drying influence altogether detrimental to the production of fine Mushrooms. When it is possible to introduce fresh heating manure at short intervals, enough heat of a moist kind is produced to keep the beds in bearing without the need of almost daily surface sprinklings of water.

East Lothian Stocks.—Sow seeds now, and as compost employ some quite simple material, such as sifted loam, crushed mortar and sand, the seedlings, like those of most crucifers, being addicted to stem-rot. The rose, mauve, purple and white varieties, when true, are well worth any care necessary to grow them well.

Antirrhinums.—These also should be sown at once, the tall varieties in particular requiring a lengthened season of growth to give the best results. For these I half fill ordinary cutting-boxes with a light compost, which is soaked with water a few hours before the seeds are sown. These are barely covered with very fine soil, and germinate freely in a temperature of 60°. If more water is required before being pricked out, dip the boxes in a tank of water rather than moisten overhead.

Hollyhocks.—Strong plants may be planted out as soon as or when the ground is in good condition. They are quite hardy, but may be protected for a week or two by means of a flower-pot inverted over each plant. Late-raised plants must, of course, be left till later. They will progress very well in a cold pit meanwhile.

Auriculas.—Now that vegetation is again on the move, all withered leaves should be removed from these, the dirty and sometimes mossy surface soil cleared off, and, if the soil is very dry, some tepid water applied. It requires less of this than of cold water to moisten the soil, which is an advantage. Some nice smooth compost should be applied to the surface after the soil has become slightly dry.

Cinerarias.—These are now coming freely into flower, and should be arranged in the show-house where they can be cool, especially at the bottom, but free from draughts. Often apply manure-water, and, if leaf-borers appear, crush them between the finger and thumb. Aphides must be sternly kept at bay.

Arum Lilies.—These, too, are blooming profusely, and must have abundant supplies of manure-water at the roots. The flowers are all the whiter if not grown too coolly; but much heat lessens their size and also brings hordes of green fly, which must be kept down by repeated nicotine vaporisings. *Richardia elliptica* will start well now in a strong heat. *R. Rossii* is much easier to grow.

R. P. BROTHERSTON.

Fyninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

Border Carnations.—The Carnation is a favourite in nearly every garden, but in some it is a difficult plant to grow, and especially in town gardens. This fact being realised by cultivators, they use old plants of Tree Carnations for the furnishing of various flower-beds during the summer months. Flowers on them are produced over a longer period than on the border varieties. There is one belonging to the latter, however, that generally lives for many years and flowers profusely. I refer to *Raby Castle*. Its flowers are beautifully fringed, pink in colour and of much substance. The present is a good time for the trenching and manuring of the soil in readiness for planting at the end of March.

Polyanthuses and Primroses.—These plants are now recovering from the effects of excessive moisture and coldness of soil during the earlier days of winter, and in order that the flower-stems may come stronger than usual, the cultivator should very carefully remove all decaying basal leaves, lightly loosen the surface soil, and put on a rich top-dressing of rotted manure and good loam mixed. The compost need only be laid on to a depth of a little more than an inch; the new roots will soon enter it. If the soil be light, press it down firmly with the hands while it is in a fairly dry condition.

Roses to Plant.—The autumn is really the best time for Rose tree planting, but it is not always convenient for owners of gardens to do the work at that time. The soil is very cold in January, and the early part of February will be a better time. Trench the soil 30 inches deep, well breaking up the subsoil. The manure used should be put on the surface and not allowed to come in contact with the roots. **Hybrid Perpetuals.**—Captain Hayward, Mrs. John Laing, Mrs. G. Sharman Crawford, Ulrich Brunner, Ben Cant and Dupuy Jamain. **Hybrid Teas.**—Lady Ashtown, Bessie Brown, Caroline Testout, Marquise Litta, Killarney and Captain Christy. **Teas and Noisettes.**—G. Nabonnand, Mme. Bravy, Mme. Lambard, Marie van Houtte, Souvenir d'un Ami and General Schablikine. **For Pillars and Arches.**—Dundee Rambler, Crimson Rambler, Carmine Pillar, Gloire de Dijon and William Allen Richardson. **For Late or Autumn Flowering.**—Alister Stella Gray, Mme. Abel Chatenay, Queen Mab, Gustave Regis, Clara Watson and Camoens.

Seedlings in Boxes and Beds.—The seedlings of herbaceous and other plants raised from seeds sown last summer and the early part of autumn must be protected from severe frosts by coverings of mats or clean litter resting on wooden hoops driven into the soil or on cross sticks resting on forked pegs. The roots of such seedlings are, of course, very near the surface, and consequently are quickly frozen. The covering material must be removed directly finer weather comes.

The Garden Frame.—Violet plants growing in the cool frame will soon be in full flower, and, to prevent loss from damp, open the frame every day, except when it rains, is foggy or frosty. Stir the surface of the soil with the aid of a pointed stick or common label and pick off yellow leaves. Bedding Calceolarias also require plenty of light and air. Roots will form rapidly from this date.

The Greenhouse.—Lovers of greenhouse plants must keep the glass clean, train roof climbers, removing dead wood and worthless shoots. Keep the paths dry and begin to collect ingredients for potting composts. TOWN GARDENER.

water and immerse the vase therein. The best time for the general potting of Ferns is in the latter half of February and first half of March.

RUST ON CYPRIPIEDUM LEAVES (C. S. B.).—The leaves of your *Cypripedium* are attacked by a fungus disease commonly known as leaf rust. The cause is, no doubt, local, although it may have been introduced from another source, such as upon an imported plant. Keep a nice growing atmosphere, and your plants will probably become sufficiently strong to resist future attacks. At present each specimen affected may be dipped in a solution of liver of sulphur (sulphide of potassium), at the rate of loz. to two gallons of hot water. Allow it to cool, and, after the dipping process, the plants ought to be laid on their sides till the liquid has drained away.

SPAN-ROOFED GREENHOUSE (Confidence).—Provided you have roots available, you could readily force Rhubarb under the stage as suggested, and Seakale as well. You might also utilise the house for striking cuttings of Perpetual-flowering Carnations, though, of course, for growing them afterwards they need a light and airy structure. During the spring such a structure may be employed principally as a propagating-house, in which may be struck cuttings of the various subjects that bloom in autumn, winter and spring, such as *Bouvardias*, *Salvia splendens*, *Calceolaria Burbridgei*, *Linum trigynum*, *Poinsettias*, *Euphorbia fulgens*, *Begonias* of sorts, *Eupatoriums*, *Branthemum pulchellum*, *Plumbago rosea*, *Eupatoriums*, and many other plants. These may be grown elsewhere in the summer, and in autumn, when the Cucumbers are cleared out, they may be again returned in order to develop their flowers. Such a structure, too, would be very useful in the early months of the year for the forcing of bulbs for house and conservatory decoration.

BUDDING SEEDLING BRIARS (Rosary).—Do not cut down the stocks. You may trim back the shoots to about one foot at the time of planting. The bud is inserted in the root just beneath the branches. Standards should be budded in the shoots that are produced this summer. If any old side shoots remain, cut all back close to the main upright stem. New shoots will break out at the proper time, and into these the buds may be inserted.

MISCELLANEOUS.

GLADIOLUS EUROPA (G. J. B.).—*Gladiolus Europa*, concerning which you enquire, is, as shown on August 16, 1910, when an award of merit was given it, a very fine, pure white flower of good form. In some cases as many as half-a-dozen flowers were open at the same time. Our opinion is not founded on a spike or two, as it was then shown in considerable numbers. We, however, have had no practical experience of it; but everything pointed to it being of good constitution.

BOOKS ON LILIES (New Zealand).—“*Lilies for English Gardens*,” by Gertrude Jekyll, obtainable from this office, 8s. 6d.; “*The Book of the Lily*,” by W. Goldring, 2s. 6d., from John Lane, The Bodley Head, Vigo Street, London; “*Lilies*,” by A. Grove, 1s. 6d., from The Publisher, 41, Wellington Street, Covent Garden, London, W.C.; and “*Notes on Lilies*,” 2s. 6d., from Messrs. Wallace and Co., Kilnfield Gardens, Colchester. These are all of a useful nature, the first-named being, perhaps, the most valuable. The postage would be extra in each case.

GREEN GROWTH ON ROSE SHOOTS (W. B.).—The green growth on the Rose shoots is not a fungus, but an alga capable of making its own food, and in no way a parasite. It may be found growing almost anywhere where the conditions of light and moisture are suitable. It is probable that some other cause is responsible for the death of the Roses. The green growth may easily be got rid of by spraying the Roses with a weak caustic wash, say, three-quarters of a pound to one pound of caustic soda to ten gallons of water; but the spraying must be done while the trees are dormant.

FEATHERED HYACINTHS (A. M.).—We do not quite understand your failing so completely with these easily-grown bulbous plants, and, assuming that you started with good bulbs and that their non-appearing has been general, we can only assume that your soil is wrong, teeming with slugs, millipedes and the like, which do irretrievable mischief to such things. Usually in light soils these plants are of the simplest culture, though often enough in cold and retentive soils they are bored to death, rendered so full of holes, and every vestige of leaf and root fibre so eaten away that any evidence of life above ground is impossible.

EXHIBITING SWEET PEAS (Puzzled).—We are afraid that you will have to exhibit in the classes open to all. We take it that you are a skilled professional gardener, and it would not, therefore, be quite fair for you to compete in the classes reserved for amateurs having no special knowledge or experience. As far as the National Sweet Pea Society is concerned, you would have to stage your own blooms or arrange with an accommodating friend to do it for you. At some provincial exhibitions the committee undertake the staging of produce when it is impossible for the owner personally to attend. The varieties you have are all excellent, and, grown to perfection, should carry you to success in strong competition.

NAMES OF PLANTS.—Mary Jane.—The specimens sent are ordinary Watercress.—*Russel*.—1, *Sempervivum Haworthii*; 2, *Mesembryanthemum polyanthum*; 3, *M. echinatum*; 4, *M. edule*; 5, *Othonna carnosa*; 6, *Mesembryanthemum maritimum*; 7, *Ophiopogon japonicus*; 8, *Helxine Solierii*; 9, *Selaginella Braunii*; 10, *Moschosma riparium*.—*D. E. W. G.*—*Bilbergia nutans*.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the “Answers to Correspondents” columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FRUIT GARDEN.

BLACK MARKS ON NECTARINE SHOOTS (A. J. A., Dorking).—The Nectarine shoots are attacked by the disease known as “die back,” due to a fungus which grows in and kills the shoots. All shoots showing these dead parts should be pruned out and destroyed during the winter. See that the border is thoroughly well drained, and do not stimulate the trees to rapid growth.

SMALL FIGS (W. E. T.).—Do not remove the partly-passed fruits from your Fig tree. They will probably pass through the winter uninjured, and will commence to grow again when the days get warmer. Such fruits form the earliest crop of a Fig tree, a later crop being produced from buds on the new wood. We should advise you simply to leave the tree alone and let things take their course. Should severe weather occur and injure the young fruits, they will fall naturally, and, at any rate, they are not likely to do any harm to the tree by being left on.

GROS COLMAR GRAPES NOT COLOURING (Hal).—The appearance of the Grapes points to the fact that the Vines were overcropped, and also that the foliage must have suffered from red spider or some other weakening cause before the Grapes had been properly developed, coloured and ripened. Last summer was exceptionally hot and dry, and the Vines may have suffered also from inadequate ventilation and from dryness at the roots. The stalks of the berries had given way and were dead before their functions were completed, by reason, we think, of the above causes.

FRUIT TREES ON WALLS (D. F. F.).—Apples, Pears and Plums would succeed very well on your west wall, provided some turfy loam of a heavier and stiffer texture were mixed with your light soil, say, half a barrow-load to each tree, well mixing it with the natural soil. You could not depend on a good crop of either of the above fruits this autumn, but you could the following autumn. As regards your north wall, if you were to plant this with cordon trees of Gooseberries and Currants, you should have a fair supply of fruit this autumn. If you decide not to plant fruit trees against your west wall, Tomatoes would do well against it and be remunerative. Apples: James Grieve, King of the Pippins and Cox’s Orange; Pears: Beurré Giffard, Williams’ Bon Chrétien and Doyenné du Comice. Red Currants: Pay’s Prolific, The Comet and Versailles. Gooseberries: Rumbullion (red), Laagley Gage (white) and Keepsake (yellow).

TREES AND SHRUBS.

CÆSALPINIA JAPONICA NOT FLOWERING (Alford).—We are afraid that you can do little to induce your *Cæsalpinia japonica* to flower. You might try, however, starvation treatment, as you say that it grows luxuriantly. Perhaps it is too well fed and all the energy goes to make rank growth. Root-pruning might assist in checking growth; it would, at any rate, be worth while to find a few of the principal roots and shorten them somewhat. If you have been in the habit of feeding the plant, stop the extra food supply for a year or two.

CATALPA BIGNONIODES (A. W. W.).—The Indian Bean Tree, *Catalpa bignonioides*, may be planted at any time from the present up to the middle of March. Make a circular hole 1½ feet deep, digging or loosening the soil in the bottom of the hole. If very heavy, mix a little sand with the soil. Fill in to within 9 inches of the surface and allow the soil to settle for a few days; then plant the tree, taking care to keep the upper roots near the surface of the soil. Tread in well, and after the ground has settled somewhat, turf the outer part, leaving a circle 3 feet in diameter around the trunk of the tree. A mature tree may be anything from 20 feet to 40 feet high, with a spread of branches of 25 feet to 45 feet. The diameter of the trunk may be from 12 inches to 15 inches.

THE GREENHOUSE.

OXALIS (M. M. N. D.).—The leaves sent are those of *Oxalis Ortgiesii*. You say nothing as to the conditions under which the plants have been grown; but we would point out that this species requires more heat than most of the others for its successful culture. It is a native of the Andes of Peru, and succeeds best in the temperature of an intermediate house. The discoloration of the leaves is certainly due to some error in culture, either from lowness of temperature (which we suspect) or from some deleterious matter at the roots.

ABOUT FERNS (Mrs. E. P. S.).—The Ferns sent are: 1, *Nephrolepis exaltata Amerpohl*; 2, *Pteris tremula*; 3, *Nephrolepis cordata compacta*. They are all three amenable to the same treatment; that is to say, the most suitable temperature for them is that of a warm greenhouse, where a temperature of 50° to 65° is maintained during the winter. As a potting compost, providing the leaf-mould is good, it is the equal of peat. Such a mixture as that detailed by you is very suitable for Ferns in general. No. 1 is of a rather delicate constitution, and is apt to damp off unless the atmosphere of the structure is light and buoyant, while No. 2 is of a vigorous nature, and needs more liberal treatment than the others. As you do not wish them to be in larger pots, you may feed them with one of the concentrated manures, of which there are now so many on the market. Be sure to follow the instructions given, as many of them are very powerful. They are all much cleaner to use than liquid manure. To stimulate the Maidenhair in a porous vase dissolve a little manure in

ROSE GARDEN.

ROSES FOR CUTTING (J. G.).—Some of the varieties you name are very good to plant out for cutting purposes; for instance, Frau Karl Druschki is easily the best all-round white Rose, followed closely by Molly Sharman Crawford. Hugh Dickson is not free-flowering enough; otherwise the colour is superb. We think the new Rose Lieutenant Chauré would be a more serviceable variety from your point of view. A good crimson is the old General Jacqueminot, and you would do well to have some of this, also of Captain Hayward, Ulrich Brunner and General Macarthur. Then there are two fine reds in Liberty and Richmond. We are still looking for a good red that will meet our requirements of being a good all-round sort, both in colour and form, and also continuous flowering. Caroline Testout, though beautiful, is being displaced by Roses of the type of Mme. Abel Chatenay and Lady Ashton, while another good sort is Mrs. Sharman Crawford. Dean Hole is not specially a good one to plant out for cutting. We would rather recommend you the Lyon Rose. Mme. Ravary would do, although its open flowers are not at all a florist’s ideal, yet it yields beautiful buds. Lady Roberts would be a fine kind to plant for a yellow. We should not advise Mme. Jules Gravereux; instead of this, plant Prince de Bulgarie or Pharisar.

THE EDITOR’S TABLE.

Flowers of the Loquat Tree from Torquay.—Mr. E. G. Haywood has kindly sent for our inspection from the Villa Borghese, Torquay, a flowering branch of this handsome Chinese and Japanese tree, *Eriobotrya japonica*. The plant from which it was cut grows in the open ground 250 feet above sea-level, and, judging from the specimen, it must be in a very healthy state. Although the Loquat frequently blossoms out of doors in a few parts of the South-West Counties and in South Wales, it appears to be flowering more freely than usual this winter, and instances of flowers being borne on plants growing against walls in the neighbourhood of London have been recorded. A plant growing against a south wall at Kew is at present bearing a dozen or more heads of flowers. Probably on account of the natural flowering-time being mid-winter, fruits are seldom, if ever, matured out of doors in this country, although they come to perfection in the South of France. These fruits are golden in colour, 1 inch to 1½ inches in diameter,

and borne in good-sized clusters. They have a marketable value, both on the Continent and in China and Japan, for they are Apple-like in character and are used for dessert. The most striking thing about the flowers is their powerful Hawthorn-like fragrance.

A CHARMING ALPINE DAISY.

(*BELLIS ROTUNDFOLIA CÆRULESCENS.*)

BURDENED with an atrociously long name is this charming little blue Alpine Daisy. It is a fairy-like plant indeed, and one which charms the devotee of the beautiful among the flowers of the rock garden. It is a truly dainty flower, giving above its pretty rounded leaves little stalks bearing small flowers of white, exquisitely tinged with blue. It grows only 1 inch or 2 inches high, and a small group of this Alpine Daisy is exquisite on a flat spot a little above the ground-level and in the rock garden. Unfortunately, this pretty flower is not absolutely hardy. Some of our inclement winters prove fatal to it, and we will, therefore, be wise if we keep a spare plant or two under glass to be ready to replace those outdoors if lost. Fortunately, however, seeds can be procured, and this Daisy can also be increased by division; consequently we need not long be without its presence in the garden. It comes from Morocco, so that little surprise may be felt at its tenderness in this variable and cold climate of ours. In some winters it is hardly affected by the severity of the frosts, but in others it is certain to succumb. Would that some raiser would secure a hardier race of this exquisite little Alpine Daisy. Seeds should be sown as early as possible from now in pots of sandy soil, and the young plants, after being pricked out and hardened off, planted on sandy soil in a sunny place on the rockery.

Dumfries.

S. ARNOTT.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THE usual fortnightly meeting and exhibition of this society was held at Vincent Square, Westminster, on Tuesday, January 23. Greenhouse flowers, especially Carnations and Cyclamen, were extremely bright and attractive, lending very pleasing tones in colour on a day which turned out exceptionally dull and gloomy. Collections of Apples remarkable for their very high colour were also a special feature of this exhibition.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. Joseph Cheal (chairman), and Messrs. A. Dean, J. Willard, J. Vert, A. R. Allan, J. Davis, P. D. Tuckett, J. Harrison, H. S. Rivers and C. G. A. Nix.

From Messrs. George Bunyard and Co., Maidstone, came a first-rate collection of Apples that at once caught the eye of visitors on entering the hall. This wonderful collection comprised no fewer than 180 varieties of exceptional quality and remarkable for their colour. A few dishes of Peas were also shown, including a dish of colossal fruits of Uvedale's St. Germain. Gold medal.

Messrs. W. Scabrook and Sons, Chelmsford, put up a capital collection of dessert and cooking Apples staged in baskets. About forty varieties were shown, including Bismarck, The Queen, Newton Wonder and Bramley's Seedling. Silver Knightian medal.

Messrs. Sutton and Sons staged a remarkably fine collection of Onions, Potatoes and Beetroots. Onions were the chief feature of this collection, and comprised Selected Ailsa Craig, A1, Reading and Bedford Champion. It is seldom that such fine and firm bulbs are seen in January. Carrot New Red Intermediate and Favourite, and Parsnip Tender and True were wonderfully good for the time of year. Silver Knightian medal.

Mr. W. E. Sands, Hillsborough, County Down, Ireland, showed a very nice lot of Irish-grown seed Potatoes, including a representative collection of the best varieties. Silver Banksian medal.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), Sir Jeremiah Colman, Bart., and Messrs. J. O'Brien, H. J. Veitch, Gurney Wilson, F. J. Hanbury, G. F. Moore, T. Armstrong, A. McBean, W. Cobb, J. Charlesworth, J. Cypher, W. P. Bound, J. E. Shill, H. G. Alexander, A. Dye, W. H. White, J. W. Potter, W. Bolton, J. S. Moss and de B. Crawshaw.

Messrs. Sander and Sons, St. Albans, showed a good collection of Orchids in season, comprising *Cypripedium* in variety, *Oncidium*, *Odontoglossum* and a lovely

plant of the primrose-coloured *Lælio-Cattleya Phryne* *primulinum*.

Many interesting species were included in Messrs. Stuart Low and Co.'s collection, notably *Angreum eburneum*, *Saccolabium bellinum* and various *Masdevallias*. Some very showy *Cattleya* hybrids and *Catanthes* were also shown.

Messrs. Armstrong and Brown, Tonbridge Wells, showed numerous bright and fresh-looking plants of *Cattleyas*, *Odontoglossums* and *Cypripediums*. The group was edged with plants of the low-growing *Masdevallia schröderiana* and *M. tovarensis* (white).

Sir Jeremiah Colman, Bart., Gatton Park, Reigate, sent a beautiful group of *Lælia* aneeps, including such white gems as *L. a. Gatton Park* variety, *L. a. schröderiana* and *L. a. Williamsii*.

Messrs. J. Cypher and Sons, Cheltenham, again showed a remarkably fine collection of *Cypripediums*, which came in for general admiration.

Messrs. J. and A. McBean, Cooksbridge, Sussex, put up some choice *Odontoglossums* and *Lælia* aneeps, also the lovely *Brasso-Cattleya Leemanii*.

FLORAL COMMITTEE.

Present: Mr. H. B. May (chairman), and Messrs. W. J. James, W. P. Thomson, G. Reuther, John Dickson, C. Dixon, W. J. Bean, R. C. Nottant, J. Green, C. T. Drury, E. A. Bowles, C. B. Fielder, J. F. McLeod, J. Jennings, W. Howe, H. J. Cutbush, A. Turner, E. H. Jenkins, C. E. Pearson, G. Paul, R. Hooper Pearson, C. E. Shea and J. T. Bennett-Poe.

Messrs. Barr and Sons, Covent Garden, had a most interesting exhibit of hardy plants, Snowdrops and the earliest Daffodils being prominently displayed. Note must also be made of a large colony of the white Hoop-Petticoat Daffodil, of *Iris Tauri*, *I. stylosa*, *Crocus Sieberii*, *C. Imperatii* and others. Hybrid *Gerberas* were also pleasing, and there were good groups of *Primula obconica* and *Narcissus Soleil d'Or*. *Lachenalia pendula* and *Lenten* *Roses* were also shown.

Messrs. W. Wells and Co., Limited, Merstham, had a pretty group of Carnations, among which we noted *Wodeneth* (a very fine white), *White Wonder*, *R. F. Felton* and others.

Mr. Bertie E. Bell, Castel Nursery, Guernsey, showed a fine group of the new Carnation Coronation, in really splendid condition. The rose pink shade is most effective, and particularly so under artificial light. A very fine Carnation in every way.

Mr. E. Guile, Shortgrove, Newport, Essex, sent a lovely vase of Carnation *Lady Meyer*, a greatly-improved *Euchantress*.

Messrs. James Carter and Co., Raynes Park, had a pretty exhibit of *Primula sinensis* in variety, the most remarkable form being one named *Oakleaf*, said to be a seedling sport from a double salmon variety, and which, happily, reproduces itself true from seeds. It is a most interesting departure in *Primula sinensis*. Many other good *Primulas* were shown.

Messrs. James Veitch and Sons, Limited, Chelsea, filled a table with greenhouse flowering plants of a useful and attractive character. Of these we noted *Primula kewensis*, *Begonia Winter Gem*, *Coleus thyrsoideus*, *Senecio grandiflorus*, *Daphne indica rubra*, *Azaleas* in brilliant variety, *Primula kewensis farinosa*, *Freessias*, *Tillandsia Lindenii*, and a delightfully-flowered lot of *Camellias* in dwarf plants. Palms and tall, well-flowered specimens of *Acacia dealbata* lent additional charm to a very beautiful group.

Mr. H. Burnett, Guernsey, had an imposing group of Carnations, a central group of *White Wonder* being very fine. *R. F. Felton*, *Marmion*, *Scarlet Glow*, *White Eucharantress*, *Maudiam* and *Carola* were particularly good and effective.

Messrs. Stuart Low and Co., Enfield, showed splendid pans of *Cyclamen* in deepest red, purest white, *Salmon King*, *Giant Salmon*, *Giant White* and others. Carnations from this source were also very fine, *White Wonder*, *Beacon*, *Winsor*, *Gloriosa*, *Lady Alington*, *May Day* and *Fairmount* (heliotrope) being very good.

Mr. C. Engelmann, Saffron Walden, staged a nice group of Carnations, of which *Carola*, *Lady Northcliffe*, *White Perfection*, *Gloriosa* and *Scarlet Glow* were the chief. *La Mode*, of the heliotrope class, was also shown, but was not attractive in the sombre light of the day.

Mr. G. Reuther, Keston, Kent, had a delightful grouping of alpine and winter *Crocus*, these latter including *C. Sieberii*, *C. Imperatii præcox*, *C. aureus*, *C. chrysanthus fuscotinctus* and *C. c. warleyensis*, a very charming plant with yellowish flowers marked externally with crimson. *Eranthis cilicium*, *Adonis amurensis* and a colony of the early bulbous *Hiuses* were also noted.

Messrs. J. Peed and Sons, West Norwood, S.E., exhibited a collection of alpine in pots, together with *Crocus* species of the winter-flowering set.

The Guildford Hardy Plant Nursery displayed a choice lot of things, early *Cyclamen*, *Saxifraga burseriana* major, *Adonis amurensis*, *Iris stylosa*, *Erica mediterranea hybrida*, *Lenten* *Roses* and the like.

Messrs. T. S. Ware, Limited, Feltham, exhibited alpine freely in pans, *Saxifragas* being prominently displayed. *S. Boydii alba* was nicely in flower. *Hardy Heaths*, *Lenten* *Roses*, *Dianthus Atkinsonii* and the early *Cyclamen* were also noted.

The Rev. H. Buckston, Sutton Hall, Derby (gardener, Mr. A. Shambrook), showed *Cyclamen* Mrs. Buckston, a most showy and prolific flowering variety of the *Papilio* set.

Mr. Leopold de Rothschild, Gunnersbury Park, Acton, W. (gardener, Mr. G. Reynolds), showed a superb lot of *Jasminum primulinum* on standard and tall-grown plants several feet high. The effect was very pleasing and good.

The Marquis of Salisbury, Hatfield (gardener, Mr. H. Prime), showed some grandly-grown examples of *Euphorbia jaquinæiflora*, the arching racemes of scarlet bracts being simply superb. A central group of *Saint-paulia ionantha* was exceedingly well flowered.

Messrs. Carter Page and Co., London Wall, E.C., staged a grand group of *Primula malacoides*, *Persian Cyclamen* and *Primula obconica*, all in freshly-flowered examples.

Mr. Philip Ladd, Swanley, had a well-flowered basket of the salmon *Paul Crampeil Pelargonium*, which was very attractive.

Messrs. R. Gill and Sons, Falmouth, had a delightful exhibit of *Rhododendrons*, *Erica colonodes* and early *Cyclamen*, all of which were attractive. *Primula Winteri* was charmingly shown. From the same source came several dozen pictures.

The Misses Hopkins, Shepperton-on-Thames, had an exhibit of alpine with *Primroses*, *Daisies*, *Petasites japonicus*, *Lenten* *Roses* and other plants. Dry tubers of *Tropeolum tuberosum* were also displayed.

Messrs. Sutton and Sons, Reading, had a most admirable table of *Primulas* and *Cyclamen*, arranged in large groups in a most effective manner. Of the *Primulas*, *The Czar* (rich violet), *Royal White* (very fine), *The Duchess* and *Reading Blue* were among the choicest; while *P. obconica* (in superb colour) and *P. kewensis* were equally well shown. Of the *Cyclamen*, the firm's superb fringed were remarkable, a fantastic blending of crimson, scarlet and white, *Cerise Queen*, *Giant Crimson* and *White Butterfly* being conspicuous among the best of a very handsome lot.

Messrs. William Cutbush and Sons, Highgate, N., had a most effective grouping of greenhouse flowering plants and forced shrubs, *Magnolias*, *Lilacs*, *Daphnes*, *Azaleas*, *Prunus*, *Pyrus Malus Scheideckerii*, *Hamamelis* and others. *Iris histrioides major* and *I. Danfordii* were singularly beautiful among the hardy plants. Carnations, too, from this firm were very fine, and, indeed, one of the best contributions of these flowers staged on this occasion, *Scarlet Glow*, *White Eucharantress*, *Beacon*, *Mrs. Omwake*, *May Day*, *Mrs. L. Mackinnon* (fine scarlet) and *Countess of Lathom* (crimson) being some of the best.

Messrs. H. B. May and Sons, Edmonton, had a mixed table of *Ferns*, *Begonias*, *Oleander splendens variegata*, *Eranthemum pulchellum*, *Ardisia crenata* and other plants.

Messrs. J. Cheal and Sons, Crawley, put up a miniature rock garden planted with alpine and dwarf flowering shrubs. Some very beautiful plants of *Rhododendron præcox* and the variety *Early Gem*, with rosy mauve flowers, were much admired.

Messrs. H. Cannell and Sons, Swanley, Kent, staged a collection of little-known *Begonias*, including *B. richardiana* *Vastissima* (small white flowers), *Ascotensis* (deep pink pendulous flowers), *Duchartrei* (large foliage and white flowers) and *hybrida floribunda* (small pink flowers, plants of *Fuchsia*-like habit).

Mr. L. R. Russell, Richmond, Surrey, staged a good batch of the pretty *Primula malacoides*, also *Prunus triloba* in full flower and *Azalea indica Hexe*, a free-flowering and deep red variety. *Jasminum primulinum* and *Buddleia asiatica* were shown in the background.

ORCHID COMMITTEE AWARDS.

Silver Flora Medal.—To Sir Jeremiah Colman, Bart., Messrs. Armstrong and Brown, Messrs. Stuart Low and Co., Messrs. Sander and Sons, Messrs. James Cypher and Son and Messrs. Charlesworth and Co.

Silver Banksian Medal.—To Messrs. J. and A. McBean.

FLORAL COMMITTEE AWARDS.

Silver-gill Banksian Medal.—To Messrs. Cutbush, Highgate, for miscellaneous flowering and foliage plants.

Silver Flora Medal.—To Mr. H. Burnett, Guernsey, for Carnations; Leopold de Rothschild, Esq., C.V.O., Gunnersbury Park, Acton, W., for *Jasminum primulinum*; and the Marquis of Salisbury, Hatfield, for *Euphorbia jaquinæiflora* and *Saint-paulia ionantha*.

Silver Banksian Medal.—To the Rev. Buckston, Derby, for *Cyclamen*; Messrs. Gill, Falmouth, for *Rhododendrons*, &c.; Messrs. Low, Bush Hill Park, for Carnations, &c.; Messrs. May, Upper Edmonton, for *Ferns*, &c.; Mr. L. R. Russell, Richmond, for flowering shrubs; Messrs. Sutton, Reading, for *Primulas*; and Messrs. Veitch, Chelsea, for greenhouse plants.

Bronze Flora Medal.—To Messrs. Barr, Covent Garden, for hardy plants; and Mr. Bell, Guernsey, for Carnations.

Bronze Banksian Medal.—To Messrs. Cannell, Swanley, for *Begonias*; Mr. C. Engelmann, Saffron Walden, for Carnations; and Messrs. T. S. Ware, Feltham, for alpine.

SCOTTISH HORTICULTURAL ASSOCIATION.

THE annual business meeting of the Scottish Horticultural Association was held in the hall of the Young Men's Christian Association, St. Andrew Street, Edinburgh, on the evening of January 16. There was a large attendance, under the chairmanship of Mr. W. H. Massie, president. The annual report, of which a summary has already been given in our columns, was submitted by the secretary and treasurer, Mr. A. D. Richardson, and was approved of on the motion of Mr. Comfort. Mr. King, convener of the finance committee, reported regarding the funds, and this report was also adopted. The office-bearers and members of council were appointed, the former being: Hon. president, Captain A. Stirling, Keir; president, Mr. W. H. Massie; vice-presidents, Mr. D. W. Thomson and Mr. J. Dobbie; secretary and treasurer, Mr. A. D. Richardson. The president submitted the new constitution for the association, and Mr. D. Mackenzie moved an addition to provide for the association becoming an approved society under the Insurance Act, if thought advisable, and this was accepted. A lengthy discussion arose as to the proposal to limit the privileges of admission of the half-crown members to one ticket.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Royal Gardeners' Orphan Fund.—The annual general meeting of the subscribers to this Fund will be held at Simpson's Restaurant, Strand, London, W.C., on Friday, the 9th inst., at 3 p.m. The report of the committee for the past year will be presented, officers for the ensuing year elected, and eighteen children will be elected to the Fund. The poll will close at 4.30 p.m.

Protecting Alpines from Slugs.—In early spring, when the weather is mild and moist, we should be on the watch for slugs and snails, which may destroy our rock plants. All slugs we can see should be destroyed, and those plants which are especially liable to attack should be surrounded by little rings made of perforated zinc or common zinc cut round the edges to present sharp points to the invaders.

Proposed Exhibition of South African Fruits.—The Rev. W. Wilks, secretary of the Royal Horticultural Society, informs us that the following cablegram was received on January 22 by the High Commissioner in London for the Union of South Africa from the Department of Agriculture, Pretoria: "Owing to unforeseen circumstances regret Government compelled to abandon exhibition." No further explanation has yet come to hand, but it is necessary to abandon the exhibition accordingly. All notices appearing in the society's Book of Arrangements, on Fellows' tickets and elsewhere are cancelled.

Rhododendron præcox.—Among early shrubs there is nothing more beautiful than *Rhododendron præcox*. It is wreathed in spring with many lovely rosy flowers of exquisite texture and shade of colour. Once seen in perfection it is always remembered, and its opening is eagerly watched for. The early *Rhododendron* is quite hardy, but its flowers are oftentimes spoiled by frosts. With small plants, a handlight put on in the evenings when frost threatens and removed when the frost disappears is a precaution well repaid. Larger bushes cannot be treated in this way, and it may be necessary to employ mats or similar protection in severe weather when the shrub is in bloom.

The Winter Heliotrope.—The fragrant flowers of the Winter Heliotrope (*Petasites fragrans*) warrant the plant a position in the garden, for they open in January and scent the air for some distance. Essentially a subject for the wild garden, or for a position where a choice plant would not thrive, the Winter Heliotrope is not exacting in its requirements, for it thrives on fairly dry, poor soil, and also about the margins of a lake or stream where it may be occasionally covered with water. It varies considerably in height, according to the quality of the ground in which

it is growing, and may be seen at any height from 3 inches or 4 inches to upwards of 1 foot. The lilac flowers are borne in strong, upright panicles, and are over before the large, rounded leaves develop. A plant or two introduced into the garden will soon develop into a large clump, and give no trouble other than restricting its growth when it is likely to grow out of bounds.

Saintpaulia ionantha.—Such a delightful group of this charming little Gesneriad as was shown from the gardens of Hatfield House on January 23 at the Royal Horticultural Hall should serve to still further direct attention to it as a charming winter-flowering plant. It is of easy propagation, while its cultural requirements are not at all exacting. If the leaves are put in as cuttings, they quickly form plants, while seed is also readily obtainable. Raised in this way, there is, however, frequently a certain amount of individual variation, while from leaf-cuttings one need increase only the very best forms. Those shown as above-mentioned represented a particularly fine, richly-coloured type. Like many other gesneraceous plants, this *Saintpaulia* thrives best in a compost containing a fair amount of leaf-mould. An intermediate temperature suits it well. It is a native of the Usambara Mountains in Central Africa, and has been cultivated in this country for some years. Some of the more distinct forms have been grown separately, but the most striking is that with rich bluish purple flowers.

The Fuchsia-flowered Begonia.—While the tuberous-rooted section of *Begonias* and the hybrids of *B. socotrana* are far more popular than they have ever been before, most of the fibrous-rooted kinds are at present overshadowed by their younger relatives. The species at the head of this note, *B. fuchsoides*, is quite an old plant in gardens, having been introduced from New Granada over sixty years ago. It forms a stout rootstock, whence are pushed up succulent stems, whose secondary branches are clothed with ovate deep green leaves $1\frac{1}{2}$ inches or thereabouts in length. When young the leaves have a reddish tinge. The flowers, which are borne in branching panicles, are drooping and of a rich deep scarlet colour. They are not large, but are particularly bright and effective, their value, too, being enhanced by the fact that they are borne during the winter months. This species succeeds best in a warm greenhouse or intermediate temperature. It was one of the parents of *Corbeille de Feu*, a garden variety which is much used for summer bedding as well as for growing in pots for decorative purposes, under which last conditions it may be had in bloom all the year round. Many of these fibrous-rooted *Begonias* are so beautiful that if they were taken in hand by some of our cultivators and well grown, they would, we feel quite sure, be more valued than they are now.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Pelargoniums in the Open in January.—I was much interested in your leading note in "Notes of the Week," issue January 20, on Zonal Pelargoniums growing in a window-box in an Essex garden. In my garden in Hampshire there are some plants growing in boxes very nicely and without any protection. They have been exposed to 6° or 7° of frost, and are not damaged; but, of course, this part is, naturally, somewhat warmer than Essex. A number of winters ago I had some Zonal Pelargoniums and Pteris Ferns in a window-box which remained out all the winter and grew again freely the following spring, but the weather was never really severe at any time.—B.

Camellia magnoliæflora.—I was so pleased to see a very good illustration of *Camellia magnoliæflora* in THE GARDEN for January 20. When I was at Pallanza in 1902, I got a plant of it from the nursery garden of Fratelli Rovelli, who were then offering it as a new plant, and very distinct in form. It was then a very small grafted plant, which I grew on, and about two or three years ago I showed it before the floral committee of the Royal Horticultural Society; but, as it was not an orthodox cast-iron *Camellia* in form, it obtained no award. But Mr. Watson, the Curator at Kew, saw it and asked me how I got so large a bush of it, saying they had only got a small plant at Kew. Mine had about twenty blooms open, besides buds. I consider it a delightful plant and flower, both in form and colour. I got at the same time a pod (?) of *Camellia* seed and sowed it in 1902; this year it is about to flower profusely from each point. Nine years is a long time to wait patiently, or perhaps impatiently, for it to flower.—J. T. BENNETT-POE.

Iris stylosa.—Mrs. Walkinshaw does well to draw the attention of readers to this charming flower in THE GARDEN for January 20. It is so easily cultivated that I wonder it is not more grown. The foot of a south wall, no matter how low, is, without doubt, the best site, although in some localities where sand is the chief soil it flourishes quite in the open, as around Cromer, where I have seen large patches of it. No outdoor flower can give more pleasure than this.—E. M.

— I was much interested in reading the note on *Iris stylosa* in your issue of January 20. So few people seem to know of, or to grow, this exquisite winter *Iris* that too much attention cannot be called to it. Here it requires no care of any sort, and the poorer the soil the more it flowers. A sunny aspect on a dry bank is the best position, but I have some in partial shade and some in damp soil which also flourish. This winter has been an exceptionally favourable one, owing, no doubt, to the well-ripened roots after the hot summer we have had. Of the common blue variety I have six clumps varying in age from three to six years, and from these I have gathered daily since Christmas an average of thirty blooms. To-day I picked actually fifty-four, and could easily have doubled that amount. I also have a few roots of the white form with its exquisite Orchid-like flowers, and a clump of the dark purple variety, *Iris stylosa speciosa*, which I have never previously known to flower before March, but which this year is now (January 21) in full bloom. The flowers are best gathered as buds, which open directly they are brought indoors. When I send

them away by post, I roll each bud in a small piece of tissue paper to ensure its not opening on the journey and thus getting bruised or broken, as the petals are delicate and brittle. I then tie the bunch in its array of paper caps securely to the bottom of the box; in this way the blooms arrive in perfect condition.—VÆRRIS, *Niton, Isle of Wight*.

Pear Backhouse Beurré.—I was somewhat surprised to read the note upon this Pear in THE GARDEN for January 27, because I had supposed that it was long ago recognised that it was nothing but *Beurré d'Amanlis*. It must be five-and-twenty years (perhaps more—I have no notes) since I went to York to investigate this supposed novelty, and in company with the manager of the fruit tree department (Mr. Grey, I think) examined the original tree, the growing stock and the fruit, and quite convinced my guide that whatever the graft was supposed to have been, it could have been nothing but *Beurré d'Amanlis*.—A. H. PEARSON, *Lowdham*.

— In reference to the note on *Pear Backhouse Beurré*, I saw the tree on a lodge at York many years back, and also proved it in our nurseries to be *Beurré d'Amanlis*, and the foreman there at the time admitted it was so.—GEORGE BUNYARD, *Maidstone*.

Deep Planting of Fruit Trees.—May I just ask those who from time to time advocate the deep planting of Apples on Paradise stock this simple question, What is the value of a dwarfing stock if you bury it so deeply as to destroy half the roots and allow the scion to make roots of its own? I always say, plant the same depth as the tree was in the nursery; and as to the graft swelling more than the stock, I do not think this is very material. I have seen trees in which the graft was much thicker than the stock flourishing and carrying fine crops for forty years.—A. H. PEARSON, *Lowdham*.

— I notice Mr. Wadd's remarks as to trees failing under these conditions, and beg to say, although I very strongly recommend, and indeed insist on, Apples on Paradise and Pears on Quince being planted with the junction of stock and scion 3 inches below the ground-level, yet I quite as firmly insist that Pears on Pear, Apples on Crab, and all stone fruits should be planted at the same depth as in the nursery, the soil-mark being the guide. Frequent loss is caused by deeper planting; such trees being budded 9 inches to 12 inches from the ground must be grown so. How frequently one sees in private gardens Peaches with soil up to the lower branches, because the borders are constantly enriched, so that the needful stems are buried. I once saw 100 Peach trees in a house, of which 90 per cent. had died from this cause, the ten being the only ones properly planted.—GEORGE BUNYARD, *Maidstone*.

— I have had considerable experience in the planting of fruit trees and in dealing with those newly planted by other persons. So far I have not seen any good results from deep planting, and should never advise inexperienced cultivators to bury the stems of the trees. During the first year I have seen trees with several inches of the stems buried do well enough; the second year they began to give trouble and continued to do so, and I found the bark under the soil-level thin and in a bad condition. In some clayey soils, trees too deeply planted did not grow at all satisfactorily; whereas others, planted almost on the surface in similar soil in

the same orchard, moulded over and securely staked, did remarkably well. My advice to those who have had no practical experience in the planting of both fruit and other kinds of trees has always been to replant to the soil-mark showing on the stems when received from the nursery, to surface mulch and stake well, and to top-dress in the following years on soil previously deeply trenched.—B.

— I do not agree with the last sentence of the note on this subject on page 31 (January 20); in fact, in practice I reverse operations—Crab in shallow soil and Paradise in deep soil. On a deep soil the trouble is that Crab will go down, and then one must root-prune or wait years for the trees to mature before bearing much fruit, except in the case of a few sorts, such as Early Victoria, Lane's Prince Albert and Stirling Castle, which seem to me best on free stocks, even in deep soils, because they are varieties which bear so freely that one cannot get too much root-power to make the tree and carry its crop. On Paradise, in deep soil, one finds sufficient roots go down to sustain the tree through a trying summer; whereas on a shallow soil it is not so, and therefore we plant on such soils trees on Crab stocks, finding that they make plenty of fibrous roots and get a few roots down into the subsoil to keep the tree going.—APPLE TREE GROWER, *Kent*.

The Variegated Aubrietias.—While the *Aubrietias* with variegated foliage do not flower so freely in spring as those with green leaves, they are specially valuable in winter because of the bright effect they give at a flowerless time. So far as I know, there are only two varieties of this class, these being both forms of *A. deltoidea*, although sometimes offered as varieties under the name of *A. purpurea*. The flowers are small and comparatively dull as against those of the newer varieties now so numerous, but they are satisfactory enough to be useful. It is in the colouring of the leaves that the charm of these varieties lies, and in winter the variegation seems brighter than at any other time. *A. deltoidea variegata argentea* has its leaves prettily variegated with silver, and looks extremely well over a dark stone on rockwork or on the wall garden.—S. A.

Evergreens for Town Gardens.—I was pleased to see the remarks made by "H. P." in THE GARDEN for January 20 on the above subject. When I wrote the article appearing in the issue for December 30, 1911, I had in my mind the hesitancy with which many amateurs embarked on the operation of ornamental shrub-planting in or around the suburbs of our large towns, and I hoped it would elicit further information from observant readers as to suitable shrubs which I have not had the opportunity of noting. "H. P." mentions *Fatsia japonica* as doing well with him. I also know of two quite large specimens in this town. They are both in the same street, in front gardens, planted on the sunny side, but I have never seen them in flower. I have always deprecated the too free planting of the Laurel, for reasons stated in my previous article, and pushed the merits of the *Aucuba* in its place. Privets occasionally here are entirely denuded of foliage, generally during severe frost accompanied by heavy fog, notably during the very severe snap at the end of November, 1904, when over 20° of frost were registered, and on December 31, 1908, when 19° were registered, heavy fog being experienced on both occasions.—J. C. WADD, *Belgrave, Leicester*.

The Apple as a Market Crop.—From seeing one example of Apple-growing in a farmer's orchard, is Mr. Thomas justified in writing the last paragraph on this subject (page 36), in which he says, "Is it any wonder that Apple-growing is becoming popular among farmers?" If he had the experience among farmers that I have had, I think he would hesitate before penning such a note. Possibly I live amid a set of dull people outside the farming interest, but I can safely say, even though we live within a few miles of two large seaport towns, the farmers who grow Apples in an intelligent manner are quite few in number. Here and there you may come across a man with a knowledge of the subject; but the bulk of them, if they were spoken to about planting Apple trees, would say, "Shall I get a crop next year?" How useless, too, it is for the ordinary tenant-farmer, with his two years' agreement, to think of planting Apple trees. Now comes the crux of the whole question. How can the fruit be profitably disposed of? When men who are fruit-growers cannot answer this question to their own satisfaction, how can the farmer be expected to? Mr. Thomas thinks because quantities of fruit are obtained, it is equally easy to sell. That is not so, as the farmer would quickly find out if he had experience of the subject. —E. M. [Considering that many thousands of tons of Colonial Apples are being imported yearly, there ought not to be a great difficulty in disposing of really good home-grown fruit.—Eo.]

Sweet Peas Too Much Alike.—I observe under the above heading, in your issue for January 20, Professor Biffen animadvert upon the "amazing capacity some raisers have developed of detecting minute differences between their own varieties and those already in existence." He further says that his only means of distinguishing them are their labels and, as a sarcastic friend of his remarked, the prices. As one of the down-trodden class of raisers, I hope you will permit me to reply to these remarks, especially as your contributor appears to doubt the possibility of further advance in the improvement of the flower. I do not see why, as regards the possibility of further improvement, the Sweet Pea should not progress as other flowers have done; but it is obvious that, as Nature does not often make miraculous bounds, advancement can ordinarily be attained only by the progressive detection of minute differences, a method which has yielded, looking back ten years, such wonderful results. Inability to see such differences has not, however, always been your contributor's infirmity, or we should not have had such varieties as Zero, Zara, Zoe and Holdfast Belle, which I brought out for him. The last, for instance, is stated by the person he quotes to be simply another name for Mrs. Henry Bell; also, on the same authority, we may take it that Zero is another name

for Etta Dyke. If, however, your correspondent is unable to see differences except in his own handiwork, it goes to prove what I have long thought, viz., that many men who deal in flowers have not a sufficiently good eye for colour to appreciate differences and delicate beauty, and that such work is where women may excel. Your contributor, for instance, unsparingly condemned Evelyn Hemus both before and after I showed it! The article ends by suggesting to the National Sweet Pea Society, among other things, that amateurs should carry out the task of reporting upon varieties. With this I agree, but I consider that the "quasi-novelties" should not be judged by quasi-amateurs. Reform in the



A SNAP-SHOT OF MR. ROBERT SYDENHAM, PRESIDENT OF THE NATIONAL SWEET PEA SOCIETY, AT THE SWEET PEA TRIALS, SUTTON GREEN, LAST YEAR.

National Sweet Pea Society can, however, come only from within the tabernacle and not by advice from a coign of vantage without.—HILDA HEMUS.

FORTHCOMING EVENTS.

- February 5.—National Chrysanthemum Society's Annual Meeting at Carr's Restaurant, Strand, London, at 7 p.m.
- February 6.—Royal Horticultural Society's Meeting and Exhibition.
- February 9.—Royal Gardeners' Orphan Fund. Annual Meeting at Simpson's Restaurant, Strand, at 3 p.m. Manchester Orchid Society's Meeting.
- February 10.—Chester Paxton Society's Meeting.

HOW TO EXHIBIT SWEET PEAS.

AFTER mastering the various difficulties in connection with the successful cultivation of Sweet Peas for exhibition, the exhibiting of them should not be a very great problem. One of the best lessons that the prospective exhibitor could have is to go to a show and watch how the experienced exhibitor has brought his flowers to the exhibition, the manner he has them packed, how he arranges them in the vases, and how he disposes the various colours about his exhibit so as to get the most pleasing effect from the material at hand; but, better still, if he could go to a friend's garden and see all the details as to cutting and packing, he would then have all the experience necessary without having to bother about reading up the matter or paying for his experience by having a batch or two of flowers spoilt by bad packing or bad setting up. Unfortunately, everyone is not able to gain experience in this way; so probably a few short notes under this heading may help those who are thinking of making their *début* as exhibitors. The care of the plants just previous to an exhibition must always be of vital importance; everything must have been done to ensure them being in a good vigorous condition, and according to the nature of the weather prevailing, the old flowers must be removed some two or three days beforehand, thus ensuring that no stale flowers are used.

Shading is another little matter that must be attended to, and whatever varieties it is necessary to shade should be covered immediately all the old flowers have been removed. A light piece of tiffany well above the flowers is all that is necessary, anything of a heavier nature being apt to rob the flowers of colour rather than to help it. Too much shading is very detrimental, and only those varieties that are known to burn badly should be shaded at all, though it might be permissible to protect one or two of the mauves and pale blues in the event of very wet weather, these two colours being very apt to spot, especially if the flowers are packed damp and they have to travel any distance. Strong doses of artificial

manure should be avoided just previous to a show, and certainly should not be given within a fortnight of a particular show where, perhaps, every point is necessary to secure an award. During a wet spell the colour is terribly lacking in Sweet Peas that have been overfed with artificial manure; hence the above advice.

Cutting the Flowers.—The blooms, if possible, should be cut when quite dry, and during the operation they must be held quite loosely in the hand, as they will bruise if held tightly and in too large a bunch. To the experienced hand this little bit of advice is not at all necessary; but who has not seen a novice holding the stems tightly close

under the flowers when he only ought to be holding them lightly by the ends of the stems? After cutting they should be placed in water in a light, airy room or shed, and, if at all wet, placed thinly in the vases to allow the air to dry out as much moisture as possible. Here they can remain until the time for packing; but if they have to travel far, two or three hours in water will not be too long.

Packing.—To prevent bruising, the packing must be carefully done, and though some growers favour packing the bunches upright, I do not think it is really necessary, unless the flowers have been cut very much on the young side. In ordinary circumstances, packing flat in either light boxes or hampers will do well; but unless the blooms are to go only a very short journey, more than one layer must not be put in a box, though the closer they are together in this one layer the better, so that they do not move about in transit and bruise in that way.

Arranging Flowers at the Show.—The setting up at the show is a source of worry to some people; but if the would-be exhibitor wishes to be an adept at this, he must get a few vases similar to those used at exhibitions and practise setting up at home. He will then get to know exactly how to start and finish a vase without having to shift the flowers after he has once placed them. A few Rushes or Asparagus foliage in the vases will prove a great help in this matter, and if a few vases are arranged, say, twice a week for two or three weeks, by the time the show comes round the matter will be quite easy. It is wise to arrange your colour-scheme at home, putting the same down on a piece of paper, and then as you unpack the blooms at the show they may be put in vases and placed in their proper position without having to keep moving them about, to the discomfort probably of the exhibitors on either side of you.

Arrangement of Colours.—In arranging a colour-scheme one should try to get a nicely-balanced group, with the bright or dark colours distributed fairly evenly over the exhibit; and should one be short of these, keep them away from the edges of the exhibit, whether it is large or small. Work them more in the centre, when the lack of them will not be so noticeable. In a class of twelve bunches, for the exhibit to be strong one bunch only should be chosen from the various colour classes; but as there are four different classes of pinks—blush, pink, cream pink and deep cream pink—three of these may with advantage be used, as among the pinks we have some of the very finest quality Sweet Peas.

Quality of the Blooms.—Perhaps I had better try to explain my idea of quality in Sweet Peas. A Sweet Pea to be of good quality must, in the first place, be of full size, not gross and coarse,

with all the edges of the standard marked through opening unkindly, but with a good open single standard, clear and good in colour, with plenty of substance in both standard and wings. The latter should not be too open, but inclined towards you and partially covering the point or apex of the keel. The stem should be stiff and anything from 12 inches to 16 inches in length; but, after this, extra length is rather more detrimental than otherwise. The blooms should not be too far

THE IMPROVEMENT OF SWEET PEAS.

THE publication of the sixth edition of Sydenham's "All About Sweet Peas" removes one of the greatest difficulties from the path of the perplexed Sweet Pea grower. In it the policy has been adopted of grouping together all those varieties which, in the opinion of the author, are too much alike. With such a list before one,

selections of varieties can be made with confidence, knowing that there is no longer the possibility of growing the same sort under two or more different names. It is surely a good omen that this has been published in the same year in which its author becomes president of the National Sweet Pea Society. Many of us will hope that the extended opportunities the society's trials offer will lead him to continue this work and help still further to stem the endless flood of quasi-novelty.

Even to those who grow on a large scale, Sydenham's list may prove something of a revelation. To mention a few colours only: Etta Dyke heads a group of no fewer than twenty-two waved white varieties; Mrs. Charles Foster, of twenty-six waved lavender; Black Knight Spencer of twenty-one waved maroon; while Clara Curtis already has sixteen waved cream counterparts. It is hard to believe that even the raisers found differences enough in the "novelties" they marketed to warrant quite so many in each of these sections. Yet the process of distributing these too-much-alike "novelties" will go gaily on this season.

The National Sweet Pea Society's trials contained some 250 of them, and with the best will in the world the judges could only find seven worthy of any award. Small as the proportion seems, many are, nevertheless, of the opinion that more than one of these favoured sorts is but an old friend under a new name. Such a state of affairs would make one pessimistic as to the possibilities of further improvement, had not one seen

here and there a few outstanding varieties. We must, however, look forward to a slower rate of progress in the immediate future, for the waved standard has now been obtained in conjunction with every colour known in Sweet Peas before its advent. Further, we can hardly expect much in the way of distinct colour "breaks," for there can be little doubt that the professional and amateur hybridisers have crossed all known colour shades together repeatedly. The fact was impressed on me some three seasons ago, when no fewer than 180 crosses showing distinct colour combinations failed to produce a solitary shade that could fairly be called new.

The raisers whose one interest is the production of novelties, apart from any considerations of improving the types now grown, still have a fertile



SWEET PEA MRS. R. HAILAM, A STRONG-GROWING VARIETY SUITABLE FOR EXHIBITION AND GARDEN PURPOSES. COLOUR, SOFT SALMON PINK ON CREAM GROUND.

apart on the stem, but should nearly touch one another. With really good flowers twenty blooms are sufficient to make a good vase all round, and then, if it comes to taking out individual vases for comparison, the all-round vase is bound to score, providing, of course, the blooms are all fresh and clean. After the setting up has been done and the colours arranged quite satisfactorily, the vases should be looked over to see that no vase contains more than one variety, as this is often the cause of disqualification. The vases should be correctly and neatly labelled, and any rubbish that may be left on the stage should be cleared away, so that the whole exhibit and its surroundings look neat and tidy.

THOMAS STEVENSON.

Woburn Place Gardens, Addlestone, Surrey.

field before them. We still lack Spencer forms of the Bush and Cupid types! To raise them is the merest child's play. All that is necessary is to cross similarly-coloured Spencers with the Bush or Cupid type, and then, a year after raising the hybrid, one can pick out the required Bush or Cupid type ready fixed. These Spencer Cupids possess all the bad features of the old type, and even shed their blooms with equal facility. The Bush types, too, still require support, and are in every respect worthy counterparts of the old type.

Cambridge.

R. H. BIFFEN.

ARRANGEMENTS OF SWEET PEAS ACCORDING TO THEIR COLOURS.

THE year 1700 gave the Sweet Pea to Great Britain; 1900 saw the celebration of its bicentenary. The Crystal Palace was the arena, and the measured mile of Sweet Peas attested to the advance made. The colours which met the eye were a marvel; but the last eleven years have added almost countless new varieties and all shades of glorious colours to the list. The Sweet Pea has revolutionised the world of gardening, and from palace to cottage it reigns in all its glory. In the different varieties we get nearly every shade and tone of colour save yellow, and when the grouping in hedge or clump is rightly done, what perfect harmony meets the eye!

May I suggest that the massing of colours should be carefully studied, or the general effect will be lost. Hedges with a background of shrubs of any dark green foliage might take all gradations of reds, scarlets, crimsons and pinks; then maroons, purples, mauves, violets and lavenders; followed by oranges, salmons, creams, blushes and whites. Self colours are happier in company, and marbled and striped varieties should, I think, make a hedge of themselves. Clumps, too, are to be desired, and they give the most effective colour-schemes. The length of the hedge or hedges and clumps must vary, of course, with the size of the garden; but be the garden large or small, it may be made the garden beautiful. Look down from the upper windows of a house upon the fairy scene, the afterglow of a summer's evening painting and intensifying the glowing colours of the Sweet Peas and making one's heart glad to behold so wondrous a picture, the clumps looking like so many gipsies' tents ablaze with glory.

I saw last summer a wonderful piece of Sweet Pea gardening and grouping of colour in clumps—no jarring note to mar the harmony. The clumps were pitched with living Hazel branches 5 feet to 6 feet high, and these wigwags, if I may so call them, were perfectly distinct in their identity. The Sweet Peas ran high above the sticks, throwing their beautiful tendrils and blossoms fantastically about as if they "enjoyed the air they breathed."

Sweet Peas as climbers on houses over trellis-work are worth the trouble of trying—on grey stone or stucco with scarlets, reds, crimsons and pinks; on red brick, mauves and lavenders would be in perfect harmony; and on buildings, Sweet Peas will run in picturesque confusion.

If seeds be sown for clumps, March is soon enough; but if in pots under glass or in a cold frame, February. Plant them out in the middle of May in rounds about two feet in diameter. Arches and pergolas lend themselves most artistically to the support of Sweet Peas, though they prefer the living Hazel to climb upon. We owe much to the National Sweet Pea Society (the outcome of the bicentenary), and to the pioneers of the Sweet Pea cult whose skill and patience have wrought such marvels in the scientific treatment of this widely-known and deservedly-loved flower of the people.

H. C. PHILBRICK.

HOW TO GROW GOOD SWEET PEAS.

WHEN you, Mr. Editor, asked me to write an article for your Sweet Pea Number, I hesitated,

of September, for the following reasons: I find that seeds germinate much better than they do in, say, the first week in February. The temperature of the soil is much warmer, the plants showing in a fortnight or three weeks, according to the season. This year, by the way, has beaten all records so far as growth and germination are concerned, and in many of my boxes I have 100 per cent. of the seeds sown now nice sturdy plants, and one cannot do better than that. This is due to the fine summer and the splendid conditions for harvesting the seed. Then, again, autumn-sown plants are far stronger and have more roots than spring-sown ones; they bloom about two weeks earlier, and I am certain give better flowers; and, above all, are more able to resist disease and stand the checks they get by sudden changes in temperature, provided, of course, they have been kept very hardy all through the winter and not coddled in any shape or form. I know that many growers who sow in the end of January and start their Sweet Peas in a heated greenhouse, then remove the plants to cold frames before they are at all drawn up and nicely harden them off, have almost as good results; but I have not this accommodation for the quantity I grow, so the autumn is the time for me. The pleasure I get in watching the plants during the dull winter months counts for something also.

Soil for Sowing.—A week or so before sowing, prepare the soil,

which consists of good turfy loam that has been stacked up to mellow, passing it through a coarse sieve, and then mix some good leaf-soil with it and add a small quantity of sand, well mixing the whole together. I do not use any manure, as seedlings do not want it, provided you get the right sort of fibrous loam. I use large wooden boxes, such as Sunlight Soap boxes, so easily obtained from the grocers or oilmen. These are, of course, fairly deep, and are rather heavy for lifting about; but it is important that there should be plenty of room for the roots of autumn-sown Sweet Peas. Do not forget to make holes in the bottom for drainage, and crock the boxes as you would for pots. Press the soil fairly solid; this is necessary, as a loose soil causes the plants to be soft and weak. When sowing the seed I use a handy little tool of my own device, made of wood, something like a rake, with large, blunted teeth half an inch in length. When well pressed down on the surface of the box this makes holes at equal distances and of equal depth, rendering it very easy to drop in the seeds, the holes being

about two inches apart. Cover up the seeds with about half an inch of soil, and press down with a block of wood. Label each box and mark on the back of the label the number of seeds in each, as it is interesting to be able to count the failures or successes, as the case may be. The boxes are now placed in rows with alleys



A SNAP-SHOT OF MR. W. ATLEE BURPEE, PRESIDENT OF THE NATIONAL SWEET PEA SOCIETY OF AMERICA, IN THE BACKGROUND, AND MR. HUGH DICKSON IN THE FOREGROUND. TAKEN AT SUTTON GREEN LAST YEAR.

thinking that there was nothing that had not already been written about this most beautiful and popular flower. But I could not refuse your request, and so here are a few notes on the plan that I adopt in growing my Sweet Peas.

Sowing the Seed.—First of all, I am very keen on autumn sowing, so my year begins at the end

so that I can get among them easily, putting black cotton over them to keep the sparrows off. Of course, one Pea in a pot is the ideal, where possible; but as I have now over eight thousand plants, this is quite out of the question, and still more so in the case of a relative of mine some few miles away, who has over thirty-five thousand plants, grown in the same way. I tried the paper pots last year, with anything but happy results, some of my choice seeds being wasted through the moulding of the pots, which there seemed no way of preventing. I place pieces of Carrot about the boxes to attract the slugs, which, unfortunately, are only too plentiful. While they are enjoying the Carrot, though not exactly "improving the shining hour," at least they are not eating my Sweet Peas. Look out for mice, which are almost certain to visit you. I set the "break-back" or "Little Nipper" traps. On the weather becoming cold I fill all the available cold frames with the boxes, and make a temporary shelter for the others with oil sheeting, placed on wooden supports, which is rolled up every morning, or when not required to keep off heavy rain. This also protects them from a certain amount of frost. But frost does not hurt Sweet Peas. I have seen my seedlings laid down flat, like dead

men, during a sharp frost; but when the thaw came they stood up, and were as right as ever in a few days. It is the damp and sudden changes that are harmful to them. If the soil in the boxes gets stagnant or green on the top, scratch it up with a sharp-pointed

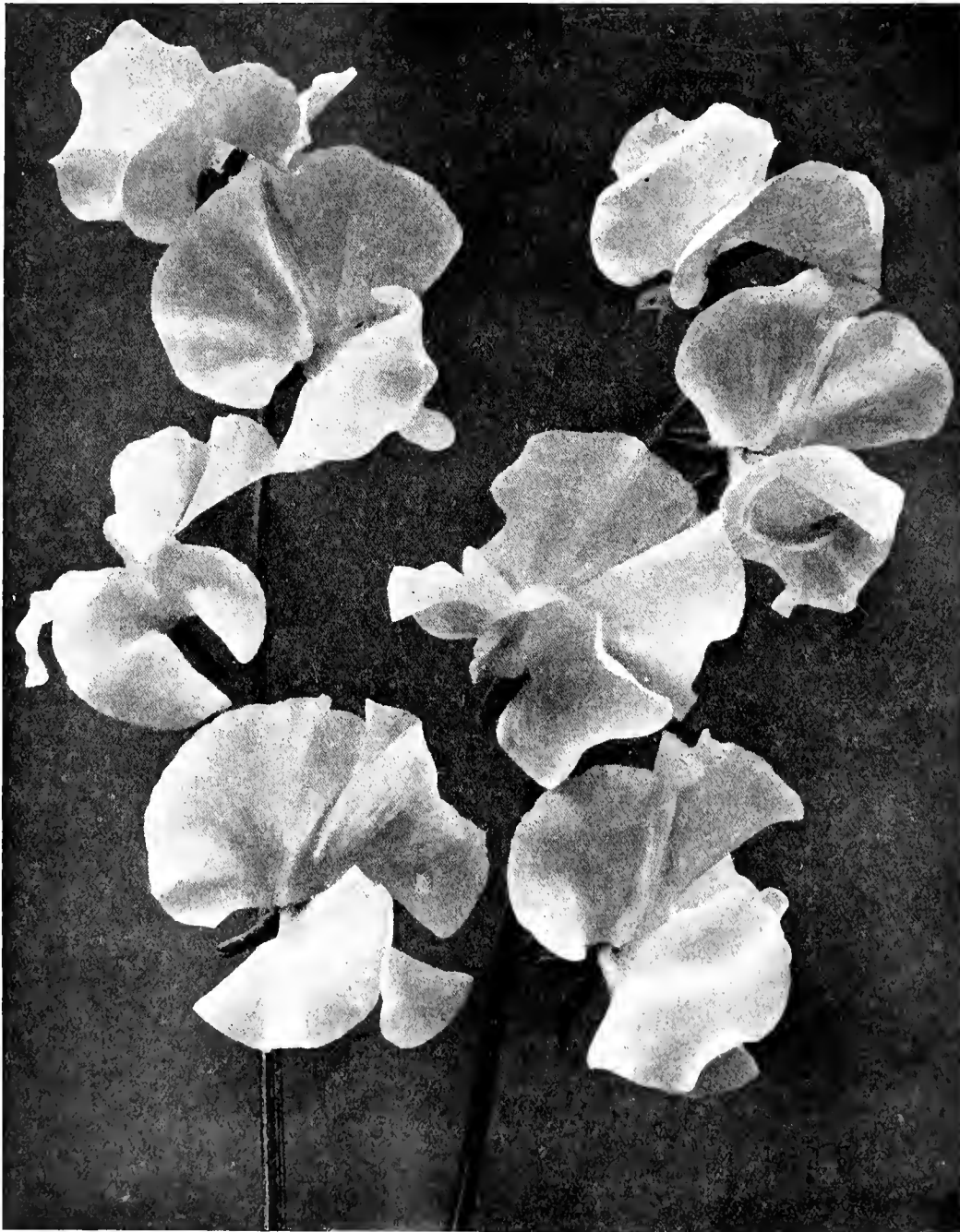
stick: this is equal to hoeing them in their later stages. The tops are pinched out of all my plants; this makes the side growths much stronger.

Planting-Out.—Early in April planting-out-time comes. Choose the right days, according to the state of your ground and the weather. In the

the varieties that are similar in colour next to each other for easy comparison.

Sticks for Supports.—I use the ordinary Pea-sticks, which are easily obtained round here, and have never used wire or wire-netting or any other support. Short, branching sticks are stuck in directly after planting, and the taller ones

put in later. Readers may ask, Why take all this trouble about planting out; why not sow in the ground? The answer is, The plants are much earlier, and you start with a perfect plant to begin with, whatever happens afterwards. I believe that Sweet Peas are something like children, and should have time and attention given them in their early stages. Having had a good send-off, they will continue to grow up in the right way. To conclude, we are proud that our county of Essex is taking such a leading place in the growing of Sweet Peas for seed purposes. Many of the large growers have found the soil and climatic conditions more suitable than in other parts of England. As many growers are aware, a vast area is devoted in the county to growing Sweet Peas for seed, several large wholesale houses having their seed grounds in the Kelvedon district. Many exhibitions in the country also make a special feature of classes



THE NEW SWEET PEA MRS. CUTHBERTSON; COLOUR, BLUSH PINK ON WHITE GROUND.
A BEAUTIFUL DECORATIVE VARIETY.

garden I grow the Sweet Peas in double rows 1 foot apart each way and 6 feet between the rows, the ground being well trenched during the winter. In the field the plants are put in with a trowel 10 inches apart in single rows and 5 feet between the rows, which run north and south. I plant

for Sweet Peas, and at Chelmsford last year there was a very good and comprehensive display. The weather is out of our control; last year was too dry. Let us hope that this summer will hit the happy medium.

Ingatestone, Essex,

E. H. CHRISTY.



Four good Sweet Peas—
Cream: Isobel Malcolm.
Mauve: Bertha Massey.
Scarlet Monarch.
Orange: Thomas Stevenson.

**COLOURED PLATE.
PLATE 1444.**

FOUR GOOD SWEET PEAS.

THE coloured plate presented with this issue represents four good varieties of Sweet Peas that are worthy of inclusion in every garden. Isobel Malcolm is an exceptionally pretty cream-coloured variety, slightly paler than Clara Curtis in most localities, though in others it comes quite as deep a shade of cream or pale primrose, and is of better shape. It was raised by Mr. Malcolm of Duns in 1909. Among Sweet Peas of mauve colouring Bertha Massey is destined to take a prominent place. It is a pleasing shade of this colour, and last year was shown in very good condition by the raisers, Messrs. Bide and Sons of Farnham. Scarlet Monarch is the best waved scarlet Sweet Pea that we know, excepting, perhaps, the new Scarlet Emperor, which we have not yet had an opportunity of testing. Scarlet Monarch (Stock D 13) in the National Sweet Pea Society's trials at Guildford last year was considered by many to be the best and truest scarlet variety there. It was raised by the late William Deal of Kelvedon in 1910, and he thought a great deal of it. Certainly its colour stands well in the sun, and the flowers are large and of good form. The fourth variety, Thomas Stevenson, is a good Sweet Pea named after a good man. Undoubtedly it is the best of the orange varieties, and when shown in 1910 under the name of Orange King created quite a sensation. This name was subsequently changed to Thomas Stevenson, as it was found that there was already one named Orange King in existence. The flowers are large, of good form and substance, and the colour is very intense. It received a first-class certificate last year from the National Sweet Pea Society, and was reserved for the silver medal offered under certain conditions for the best new Sweet Pea of the year. It was raised by Mr. Holmes of Tuckswood, Norfolk, in 1910.

TREES AND SHRUBS.

ORNAMENTAL VINES.

IN recent years quite a number of ornamental Vines have been introduced. Most of them are natives of China, and those that prove hardy are likely to make quite a new feature in the gardens of this country. The accompanying illustration shows a group of Vines trained on rustic poles in the woodland garden at Kew. The ground-work consists of China Asters, and in late summer, when the foliage of the Vines begins to assume its bright autumnal tints, such a colour combination as this is most effective and harmonious. These Vines are mostly of rapid growth, and in consequence are useful for covering pergolas, arches, fences, buildings, columns and such like. At Aldenham House, where these Vines are grown

most successfully, they are trained to cover poles linked together by drooping chains, and the effect is very pleasing indeed. Among the best species and varieties are *Vitis Coignetia*, *V. vinifera purpurea*, *V. armata*, *V. a. Veitchii*, *V. flexuosa Wilsonii* and *V. Thunbergii*.

THE ROSE GARDEN.

LIGHT *versus* HEAVY PERGOLAS FOR ROSES.

NO one who has seen the light and elegant series of Rose arches spanning the walk close by the rock garden at Kew Gardens can ever desire to have the heavy, ponderous arrangement too frequently met with. I am thinking now of a pergola or arches especially for Roses. An arrangement of thick columns of

and does not appear to harm the growths, yet I would advise that thin Bamboo canes be placed against the gas-piping, so that the Rose growths do not come in too close contact with it. These uprights are some ten feet or so in height, and are set about twelve feet to fifteen feet apart. The cross-pieces spanning the path, which is some ten feet wide, are also of gas-piping, and the arches are connected along the sides by a series of iron chains; but here stout rope would do as well, only it would not be so durable. The uprights are let into stone slabs, which are placed about eighteen inches deep in the ground.

Those who are forming a pergola at the present day can have the advantage even of Kew, for they can employ the more recent kinds. I saw no signs of a plant of *Excelsa* or of *Shower of Gold*, two beautiful new ramblers; but I noticed a fast grower had been planted in many cases to cover the tops and chains quickly, and a more moderate



ORNAMENTAL VINES AND ANNUAL ASTERS IN THE WOODLAND.

brick, stone or wood may be all very well for many of the Vines, Clematises, Honeysuckles and similar plants to clamber over or to entwine, but for Roses I prefer the light arrangement alluded to.

I was last year privileged to visit Miss Willmott's delightful garden at Great Warley, and I found myself beneath the Rose pergola there. It is true the Roses were not in full bloom, but the very heavy character of this pergola struck me as being quite unfit for the beautiful Roses that were for the most part above and could only be seen from a distance.

I would suggest that those about to form a pergola for Roses should visit the famous Gardens at Kew, and they will there see more in a few minutes than could be described in a column of writing. But for those readers who cannot go, I will just briefly describe these arches, for they are really a series of arches connected simply by chains, which enables the planter to have quite a grand display that may be seen from any aspect.

The material used for the uprights is gas-piping, and although at Kew it is quite unprotected

grower for clothing the uprights. I think we should always bear in mind the fact of the dearth of bloom among ramblers during the latter part of August and throughout September and October, so that it is wise to introduce as many as possible of the autumnal-flowering varieties. For this purpose such fast growers as *Mme. Alired Carrière* come in useful, but we are still anxious to receive from raisers some perpetual-flowering ramblers bearing large clusters of bloom. The perpetual-flowering *Crimson Rambler* can be utilised freely, but Roses of the type of *Trier* and *Alister Stella Gray* are only fit for clothing the uprights.

The new variety *Sylvia* will be a welcome addition. *Longworth Rambler* is fine, but it does not ramble and is quite a misnomer; in fact, its correct name is *Deschamps*. For a sheltered part *Climbing Cramoisie Supérieure* would be a grand colour; so that we can make the arches very interesting in the autumn, especially if, as I suggest, some of the free-growing *Teas* of the *Safrano* and *Marie van Houtte* type are used to clothe the uprights. P.

SWEET PEA NOTES.

The Floral Committee.—The occasion of the last meeting of the general committee of the National Sweet Pea Society was rendered more than usually important by the fact that it had to elect the floral committee for the current year.

It had been decided that nominations of persons from the members of the society should be received by the secretary on or before a specified date prior to the meeting. The object of this was to give all members an opportunity of participating in the election of the most important committee connected with the society. I am in doubt whether the result of that invitation should be accepted as denoting complete confidence in the personnel of last year, or laziness on the part of the members. The returns were few in number, and scarcely any new names were put forward. The depth of knowledge possessed by the several members elected is profound; but whether their decisions will bring unbounded satisfaction to anyone except themselves remains to be proved. The establishment of a floral committee in connection with the National Sweet Pea Society was one of my pet projects a few years ago, and I am told that when the scheme came to fruition I was made chairman, a fact that I had entirely forgotten. I am modest for myself, but I deplore the fact that one's fame does not live.

Catalogues and Orders.

—I fail to see why specialists in Sweet Peas issue catalogues in the winter and spring. I am incessantly told that no one can achieve the best results unless the seeds are sown in the autumn, and that all growers now adopt this system. If this is a fact, then the winter and spring lists represent money devoted purely to the encouragement of printers, and I cannot bring myself to believe that all the Sweet Pea people are so purely philanthropic. My idea is that not one-half of the enthusiasts in Sweet Pea culture give more than a passing thought to autumn sowing, but wait until the winter

catalogues and advertisements come out before they decide what varieties they will grow. It seems to me that vendors have a similar impression, or the catalogues would not be published. Now is the time to order, and when the seeds arrive sow them at once if it is intended to commence in pots, or hold them until March is well in if they are to

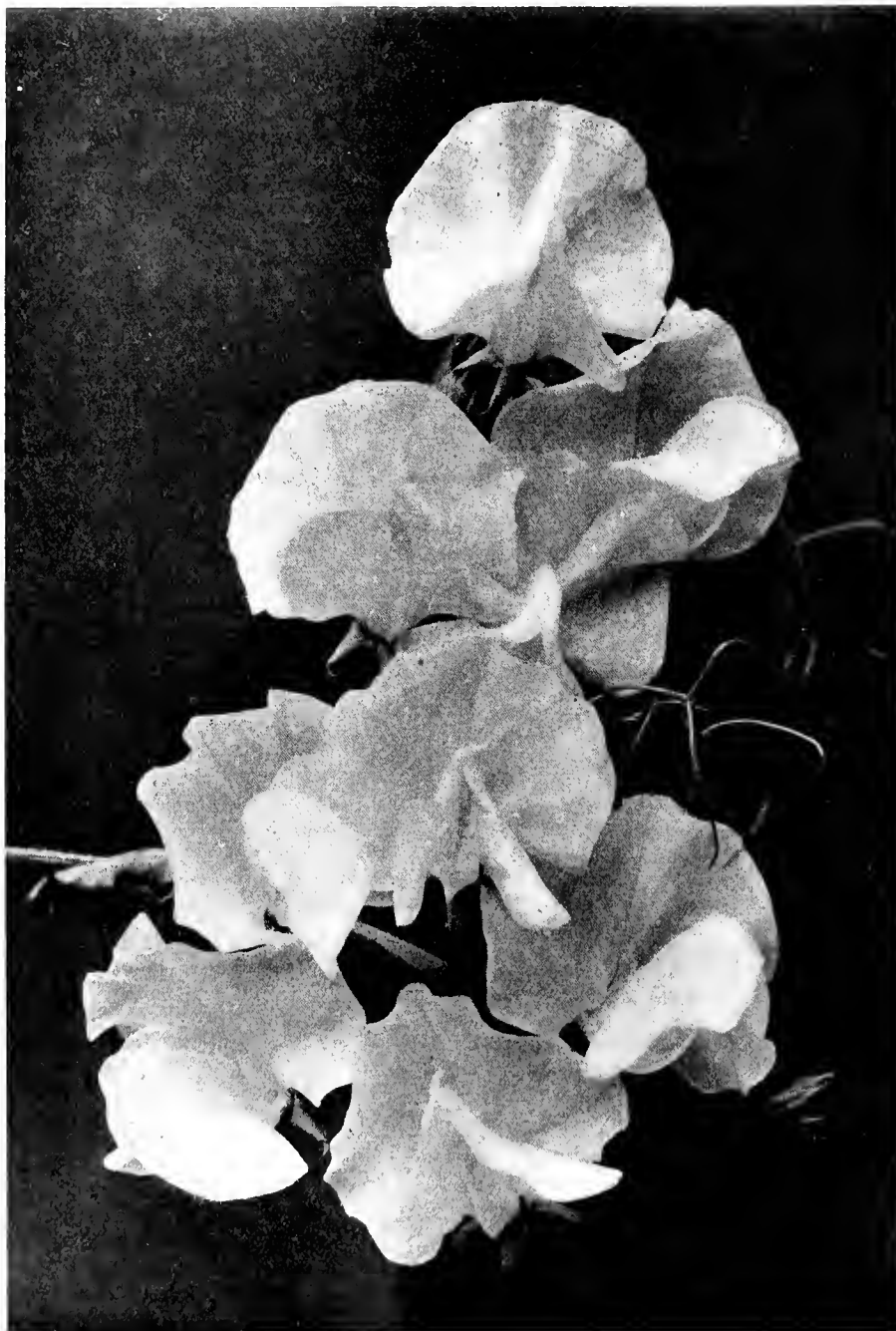
someone with enough nerve to recommend certain varieties as of superlative merit in this Special Number of THE GARDEN. I can leave the task alone, and shall then be free to criticise instead of being in the unenviable position of the criticised. A piece of good advice—order immediately from the most reputable sources.

Soil Preparation.

—The headings of the paragraphs preceding this one sound like words, whereas this particular one spells work, and hard work, too. It may not be purposed to do any seeding for another six weeks or even more, or to consider planting out before April has run half its course; but the importance of preparing the soil for either method of culture cannot be disputed. As soon as it is permissible to go on the ground, set to work to finish the operation which was commenced in the autumn, or to carry out all the details now. As far as mechanical work is concerned, one can only urge the cultivator to open up by perfect bastard-trenching the utmost amount of cultivable soil. In some gardens this will mean 1 foot, in another 2 feet, in others 3 feet or even more. The actual depth must obviously depend upon individual conditions, but it may be mentioned that the deeper the ground the better the results will be, provided, of course, that all other conditions are equally favourable.

Manuring the Soil.

—The natural manure utilised should be thoroughly rotted. It ought to be incorporated with the second spit if that is possible, and, if not, let it go between the second and third and the first and second. Do not put a solid layer of manure 1 foot or so in thickness at 12 inches or 15 inches beneath the surface, as is too commonly done by those who think that the sum and substance of manuring



SWEET PEA ETTA DYKE, A COMPARATIVELY OLD YET BEAUTIFUL WAVED WHITE VARIETY, GOOD FOR EXHIBITION AND THE GARDEN.

go direct into the quarters in which the succeeding plants are to flower. There are more novelties offered this season, I think, than in any year before, so I do not envy the task of the tyro who has to make a selection of the newest and choicest for himself. His easiest way would be to take the advice of others; and as there will assuredly be

lies in getting as much as possible underneath the plants. In the majority of soils no natural manure is desirable in the top spit, and if any is used it ought to be in the form of refuse material. The mixing in, however, of a little concentrated fertiliser, the basis of which is superphosphate of lime, is almost always wise.

HORACE J. WRIGHT.

GARDENING FOR BEGINNERS.

CUTTING BACK AND PINCHING SWEET PEAS.

THE coddling of Sweet Pea seedlings invariably leads to disaster. To be quite safe, the young plants should be kept in cold frames where abundant ventilation may be given, by which means a hardy lot of plants may be developed. Those who do not possess cold frame accommodation should make the most

to where there are indications of a more sturdy development of the young plant. Either method is good, although preference should be given to stopping where the plants are unduly weak and unpromising. The effect of such manipulation of the growth is seen in a comparatively short time. New, sturdy and vigorous shoots will develop in the axils of the leaves that are retained on the original stems of the young plants, and these will grow away in a satisfactory manner if the plants are maintained in very cool or cold conditions. The accompanying illustration represents a potful of young plants that were stopped (cut back), and serves to show the vigorous character of the new shoots. Plants from which cuttings of Sweet Peas have been procured develop in much the same way subsequently.

THE EARLY STAKING OF SWEET PEAS.

QUITE early in the life of a Sweet Pea the question of affording young plants the necessary support has to be considered. Some growers are quite content to break up an old or partially-used Birch broom, utilising the many small, spriggy pieces obtainable from this source of supply. Others whose gardens are situated in the country have no difficulty in procuring the feathery little pieces of the Hazel and other trees that abound in most districts. Those growers who are not so fortunately situated, and who possess a good hardy flower border, or, better still, a border devoted exclusively to the Michaelmas Daisies, may provide themselves with staking material of the very best kind. A few of these plants from which the old, seared growths have not yet been removed usually contain a large quantity of spriggy stakes, far more suitable for the purpose under notice than any thing else I have seen so far. If it is necessary to dig over the hardy flower border in preparation for the next year's display, the Michaelmas Daisies may be cut down and the more suitable pieces tied up in bundles to be utilised when required. These small stakes should be sharpened to a point, and then inserted between the seedlings for their support, assuming several plants are growing in a 5-inch pot. Individual plants in smaller pots should each receive a stake of a suitable kind. No matter which system of planting be observed—rows or clumps—these stakes are invaluable to both methods. In the

accompanying illustration there is portrayed a clump of six Sweet Pea plants set out well apart at the time of planting, and between the plants branching growths of the Michaelmas Daisies are inserted, to which some of the young plants already show an inclination to turn. D. B. CRANI.

THE TREATMENT OF VIOLETS IN FRAMES.

VIOLETS in frames do not require a high temperature. If the frames are heated by hot-water pipes, the latter must only be warmed in frosty and foggy weather; at all other times the interior of the frames must be kept cool, and the lights taken off in bright, mild weather. If kept too close, the leaves and flower-stems are drawn up weakly and the plants cease to bear flowers very early. Strong runners will grow from the parent plants in February, and if a new plantation is required in the open border, or a stock needed for forcing again next winter, every care must be taken of these early runners. Place a small heap of new soil under each young plant and peg down the runner into it, so that new roots will form and not get disturbed when the cultivator is engaged in gathering the flowers. By the first week in April the young plants will be sufficiently rooted to be removed and transplanted in prepared borders in the open air. Such plants are much more satisfactory than those secured by the splitting-up of the old ones when the latter are cleared out of the frame. SHAMROCK.



SWEET PEA PLANTS WITH THEIR TOPS PINCHED OUT TO INDUCE BUSHY GROWTH.

of an absolutely cold greenhouse, arranging the plants on shelves near to the glass. At this point the question arises as to what should be done with young seedling Sweet Pea plants that have become attenuated and weak through unwise and indifferent culture under glass in their early history. Drastic measures should be adopted with plants that have got into this unsatisfactory condition. Weak, spindling plants, without the power of maintaining themselves in an upright, sturdy manner, should not be tolerated, as they very seldom evolve satisfactorily afterwards, and are often troublesome to deal with when more genial weather prevails. Pinching or stopping should be observed in such cases and in the case of plants to be flowered in pots, as this treatment of the plants has the effect of causing a bushy development, and the rooting process also develops correspondingly. These are facts which anyone who has taken pains to observe would not care to controvert. Let those who doubt what is here stated plant weak, spindling plants that have never been pinched or stopped side by side with those that have been so treated, and long before the flowering season is well advanced convincing proof will be forthcoming of the advantage of pinching or stopping Sweet Peas, especially for garden embellishment and for cut flowers. Generally speaking, pinching is just simply pinching out the point of each young plant, and stopping is to cut back the weaker portion of the growth



SWEET PEAS, WHEN PLANTED OUT, SHOULD HAVE LIGHT SUPPORTS AT ONCE, TO BE FOLLOWED LATER BY THE PERMANENT SUPPORTS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Foliage Plants.—Palms, Ficus, Crotons, Dracænas, Pandanus and many others should be carefully sponged with tepid water to which a small quantity of soft soap or an insecticide has been added. Take care not to injure the leaves. Scale is best removed with a small brush.

Potting.—Many of the established plants will need repotting. Always avoid overpotting, and use pots that have been thoroughly cleaned, both inside and out, are well drained and, most important, have the drainage covered with rough material, such as fibrous turf. For warm-house subjects always use material that has been warmed to the temperature of the house. Carefully observe that the new soil is well worked round the old base, and pot firmly or otherwise as the plants require. A general rule to observe is that the finer the roots the firmer the soil needs to be. Never pot with wet soil, but always use it in a moderate condition.

Composts.—These will vary according to the plants in question. Most stove plants require a mixture of peat, excepting Codiaæums, and the latter prefer a compost mainly consisting of loam. Palms and Ferns, too, require the addition of peat. Leaf-mould should be mixed according to the nature of the loam, but usually about half the quantity of the former to the latter. Add sufficient sand to make all porous.

Watering.—This requires careful consideration with newly-potted plants, and sufficient space should always be left in the pot for filling up with water. Newly-potted plants are best soaked in after potting; that is, thoroughly well watered, and then allowed to dry sufficiently before being watered again. Do not be tempted to water a plant merely by the appearance of the soil on the top of the pot, but rap the side of it, or with small pots just lift them up. Always use water with the chill taken off. Most newly-potted plants in warm positions in houses or pits will be greatly assisted by judicious damping down of the surroundings and light sprayings overhead when the weather permits.

Melons.—To be successful with the culture of early batches, sufficient fire-heat must be employed to maintain a temperature of at least 60°. Sow the seeds singly in small pots in a loamy compost and plunge in a hot-bed. As soon as the seeds have germinated, elevate them to the glass. In the meantime prepare the bed, and unless plenty of piping exists underneath, make a hot-bed first of long straw manure and leaves. Good loam, made quite firm, and the addition of a sprinkling of bone-meal, soot, lime-rubble and a little good artificial fruit fertiliser will suit admirably. Allow the rank heat to escape from the materials before building the bed, and let the whole sink to its normal level before planting.

Cucumbers.—These require raising in a similar manner to Melons. When germinated, give the young plants the maximum amount of light and water carefully. Stake the plants as soon as needed.

Sowing Seeds.—Sow now in a gentle heat seeds of *Streptocarpus*, *Pentstemon*, *Gloxinias*, *Begonias*, *Grevillea*, *Cyperus*, *Asparagus Sprengeri* and similar plants, also a little Lettuce, Parsley, Cauliflower, Celery and Vegetable Marrow for early supplies.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Sweet Peas.—It is now quite time to sow in pots singly the number of seeds required to fill rows or clumps. Soak the soil an hour or two previous to putting in the seeds, and cover with something that will exclude mice, placing the pots in a warm structure till germination is effected; then keep quite cool.

Preparing the Ground.—This is best done in autumn, but may be effected now, only the soil must not be wet, and, as trenching proceeds, firm the soil sufficiently that no part of it be loose when completed. A sprinkling of pigeon-manure and soot applied to the surface is advantageous, but chemical manures are now, I think, best left out.

Primula obconica.—To produce very strong floriferous plants to bloom early, seeds may now be sown and germinated in a hot-house. There are many distinct and pretty shades of rose, pink and lilac to be had with large blooms. They are, indeed, indispensable for autumn and winter use, but they ask for a long season of growth.

Winter-flowering Carnations.—A goodly batch of cuttings should be secured without delay. They root freely in ten days to three weeks when inserted in wet sand and kept wet till rooted, with a not too strong bottom-heat. Till roots are produced there is no top growth; consequently there is no danger of the little plants being softened, provided they are not left too long in the cutting-box after rooting.

Begonia Gloire de Lorraine.—As these become exhausted with flowering, give less water at the roots, and after a week or two trim off the old stems, in order that new shoots may be formed for propagating purposes. Healthy leaves with the stalks attached may be used for propagating, inserting them singly in 2-inch pots in a sandy compost and keeping the pots plunged in a hot-bed till growth commences.

Gloxinias.—Sow seeds in a strong heat to produce plants for late summer flowering. Old tubers should be shaken clear of soil and repotted in fresh material, keeping the top of the tubers level with the surface. A moderate stove temperature is suitable, and scarcely any water should be given till after growth commences.

Apple Pruning.—Where the trees were partially pruned in August, the present work will consist in completing what was then left. Established trees are certain to have many spurs much too large to bear freely, and these should be thinned sufficiently to permit of those left plumping their buds. Keep an eye on cankered spots, and cut them quite into the healthy wood.

Apricots.—These would be much more satisfactory in the North were the trees treated more like Peaches, with few spurs and the shoots widely disposed. It is now time to prune and nail the trees.

Surface Dressing.—This requires not a little judgment, for trees may appear to be quite robust, yet barren, the cure for which would be a surfacing of manure, and in other instances a different treatment might be needed. In the case of old trees on grass especially, an occasional supply of rotted manure to induce wood growth is very beneficial.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE TOWN GARDEN.

Ranunculuses and Anemones.—The flowers from roots planted now would succeed those from roots planted during last October. These plants do well in a light and fairly dry soil and near a wall, where probably some readers have had a difficulty in getting other kinds of plants to grow. Thoroughly break up the soil and put in the roots in rows 15 inches apart, and 6 inches asunder in the rows, or in clumps, five, seven or nine in each, and 5 inches apart. Plant 2 inches deep.

Broken Walls.—Owing to constant nailing of fruit trees or the shoots of climbers, many walls become fit hiding-places for insect pests, owing to the numerous holes in them made by the nails. The present is a good time for the work of pointing to be done—the filling up of all holes with either cement or the best grey lime. Before the holes are closed, however, a strong solution of some insecticide must be made and forcibly syringed into them.

Planting Box Edgings.—In old gardens there is no kind of edging to paths that looks better than Box, though it makes a refuge for slugs and other garden pests. Procure some nice bushy pieces possessing plenty of fibrous roots, and divide the clumps into parts, all being, as nearly as possible, equal in size. Cut off any long, fibreless roots. Lay down a garden line, make a trench 4 inches deep with one perpendicular side, and lay the young plants against this side so that they also touch each other. Put in first some fine loam around the roots and make it firm, then fill in the trench. The pruning or clipping must be done a few weeks later.

Crocuses.—Owing to the mild weather during the early part of the winter, bulbs in borders made considerable growth, and Crocuses especially are forward. In all cases care must be taken to prevent sparrows eating the flowers. The birds are very fond of these blossoms and will soon destroy great numbers while in the bud stage by pecking off the tops and making holes in the sides; then the flowers, when fully open, are ragged in appearance and quite spoiled. A few strands of black thread fastened to pegs so as to come just above the flowers will keep away the birds.

Rose Cuttings.—When Rose cuttings are put in during the autumn months, a callus forms at their base early in the New Year. Young roots grow from the callus and make much progress in the spring. Now, if any cuttings are found to be loose in the soil, they must be made firm again by treading, as if neglected in this respect they will probably die.

Vines on Outside Walls.—In some parts of the country, especially in the Southern Counties, Vines are grown on outside walls, trained over pergolas and arbours. The only work needed to be done now is to finish the pruning of the branches forthwith, as late pruning would result in the loss of much sap when it rises rapidly in April. Furthermore, a substantial top-dressing of pure fibrous loam, after the careful removal of the top loose soil, will be highly beneficial.

The Garden Frame.—A few seeds of Lettuces may be sown in boxes now and placed in the frame. Roots of Mint, lifted and similarly placed, will grow freely and be ready for use a month earlier than the open border plants. Roots of *Lobelia cardinalis* should be examined and divided carefully, then plant the parts in a sandy mixture in a box.

TOWN GARDENER.

THE BEST VARIETIES OF SWEET PEAS FOR EXHIBITION.

| No. | Nams. | Colour. | Alternative Varieties. | Remarks. |
|-----|-------------------------------------|--------------------|--|--|
| 1 | Mrs. C. W. Breadmore | Cream, red edge | <i>Evelyn Hemus</i> | — |
| 2 | Elsie Herbert .. | White, red edge | <i>Dainty Spencer</i> | — |
| 3 | John Ingman .. | Carmine | <i>George Herbert, Paradise Carmine</i> | — |
| 4 | Selected King.. Edward VII. Spencer | Crimson | <i>Maud Holmes, Sunproof Crimson</i> | The two alternative varieties are better than most stocks of King Edward VII. Spencer. |
| 5 | Hercules | Pink | Countess Spencer, Enchantress, Paradise | — |
| 6 | Nubian | Maroon | Tom Bolton | — |
| 7 | Helen Grosvenor | Orange pink .. | <i>Anglian Orange, Edrom Beauty, Helen Lewis</i> | This colour generally requires shading. |
| 8 | Mrs. Routzahn.. | Pale cream pink | <i>Mrs. Hugh Dickson, Gladys Burt</i> | Some stocks of Mrs. Routzahn are unfixed. |
| 9 | Queen of Norway | Mauve | Tennant Spencer, Empress | — |
| 10 | Nora Unwin .. | White | <i>Etha Duke, Freda, Paradise White Pearl</i> | It is difficult to say which is the best white variety. |
| 11 | Florence Nightingale | Lavender | <i>Asta Ohn, Mrs. Charles Foster, Masterpiece, Paradise Lavender, Nettie Jenkins</i> | It is difficult to say which is the best lavender variety. |
| 12 | Earl Spencer .. | Salmon | Nancy Perkin, <i>Stirling Stent</i> | This colour is always poor in growth and requires shading. |
| 13 | Clara Curtis .. | Cream | Paradise Ivory, Isobel Malcolm | — |
| 14 | Mrs. W. J. Unwin | White, red stripes | <i>America Spencer, Aurora Spencer</i> | Mrs. Unwin is a better flower than America Spencer, but is not so good in growth. |
| 15 | Thomas Stevenson | Orange scarlet .. | <i>Edna Unwin, Dazzler</i> | Only moderately good growers and require shading. |
| 16 | Doris Usher .. | Cream pink .. | <i>Mrs. R. Hallam, Constance Oliver</i> | — |
| 17 | Elfrida Pearson | Pale pink | Princess Victoria, Mrs. Hardcastle Sykes | — |
| 18 | Arthur Unwin .. | Rose and cream | <i>Mrs. Andrew Ireland</i> | — |
| 19 | Scarlet Monarch | Scarlet.. .. . | <i>George Stark, Premier, Doris Burt</i> | It is not easy to exhibit this colour well. |
| 20 | Flora Norton .. Spencer | Pale blue | <i>Anglian Blue, Zephyr</i> | — |
| 21 | Mrs. Townsend.. | White, shaded blue | — | — |
| 22 | Charles Foster.. | Pink, mauve shades | — | Good, but difficult to exhibit. |
| 23 | Marie Corelli .. | Rose | <i>Marjorie Willis</i> | — |
| 24 | Queen of Spain Spencer | Pink | — | Very beautiful, but small flower and weak grower. |

In the above list the first twelve varieties form an excellent all-round selection for those who require that number. Those who require eighteen varieties should choose the first eighteen in the list. Of course, in such a matter as the selection of varieties, opinions will greatly differ, and some growers would include in their first eighteen varieties which I have placed lower in the list. Comparatively few growers will require more than eighteen varieties; but, on the other hand, those who desire to exhibit only twelve are advised to grow at least three spare varieties. The varieties shown in the column of alternatives are nearly all too much like the varieties chosen to be included in the same collection. The varieties in this column printed in italics are practically as good as the sorts selected, and are possibly preferred by some growers. Only those varieties have been included which have been a year or more on the market and have proved their merits. They are all nearly or quite fixed.

New Varieties.—The following novelties for 1912 are expected to supersede Nos. 10, 11, 12, 19 and 23 respectively; White Queen, R. F. Felton, Barbara, Red Star or Scarlet Emperor, and Rosabelle. Melba is another serious rival to Earl Spencer. The following novelties will probably prove at least as good as Nos. 6, 14, 18 and 21 respectively: King Manoel, May Campbell, Mrs. Cuthbertson and Marjorie Hemus. The following novelties for 1912 are distinct from any tabulated, and are most promising. Each may prove worthy of inclusion, even in a collection of only a dozen varieties: W. P. Wright (very pale blue), Edith Taylor (carise pink), Prince George (mauve and lilac tints), and Afterglow (purple and mauve tints). The last two varieties, and also Dorothy, another promising novelty, will possibly be found to require special cultivation to bring out their undoubted merits. Loyalty, Mauve Queen, Paradise Coccinea, Juliet, Iris, Winifred Unwin, Mrs. Warren and Bertha Massey are other noteworthy novelties. The following are superior to any other pink varieties, but are unfixed, and

probably unfixed: Audrey Crier, Olive Ruffell, Marjorie Linzee and Syeira Lee. Anglian Pink and Miriam Beaver are practically identical with the last-named, and Olive Bolton with the third named variety. Mrs. George Charles, Menie Christie and W. R. Beaver or Senator Spencer are quite distinct from any varieties named, but are hardly beautiful in colour, although sometimes grown for exhibition.

Varieties for the Garden.—So far the selection of varieties has been made from the point of view of the exhibitor, but, except where otherwise stated, all the varieties tabulated are good growers, and are otherwise suitable for garden decoration. For a selection of twelve varieties for the latter purpose the following might be chosen: Maud Holmes, Nettie Jenkins, Mrs. Hugh Dickson, John Ingman, Elfrida Pearson, Mrs. Breadmore, Elsie Herbert, Nora Unwin, Constance Oliver, Queen of Norway, Clara Curtis and Nubian. Where twenty varieties are required, the following might be added: Arthur Unwin, Hercules, America Spencer, Marie Corelli, Flora Norton Spencer, Helen Grosvenor, Mrs. Townsend and Scarlet Monarch. In conclusion, I should like to point out that it is as important to grow good stocks as to grow good varieties.

Woodford, Essex.

G. F. DRAYSON.

NEW AND RARE PLANTS.

THERE were no awards made to new plants by the floral committee of the Royal Horticultural Society at the meeting held on January 23. The following awards, however, were made by the Orchid committee:

FIRST-CLASS CERTIFICATE.

Cypripedium Norah.—A bold, handsome flower of excellent form. The dorsal is very broad and well developed, deep purple maroon over a white ground. Petals soft yellow with bronze maroon markings. The lip is of a similar hue. Parentage—

Cypripedium M. de Curte . C. aureum Edippe. Shown by Lieutenant-Colonel Sir George Holford.

AWARDS OF MERIT.

Zygocolax Charlesworthii Cobb's Variety.—This variety has larger flowers and is better coloured than the type. The flowers are heavily spotted chocolate, and the lip splashed deep violet-purple. Shown by Walter Cobb, Esq., Horsham.

Cypripedium Duke of Marlborough.—A fine, bold flower with hooded dorsal. Both petals and pouch are brownish green. The dorsal is spotted deep purple on a white ground, green base. Shown by His Grace the Duke of Marlborough.

Zygopetalum Mackayii Charlesworthii.—A distinct and very much improved variety of the well-known species *Z. Mackayii*. The variety is of vigorous growth, and carried a spike over two feet in length. The lip is pure white and the perianth pale green.

Laelio-Cattleya Amabile.—A lovely variety of good form and colour. The petals are white, broad and slightly waved. The lip is well developed, purple with a deep white margin. These two were shown by Messrs. Charlesworth and Co., Hayward's Heath.

Cymbidium Schlegelii.—An attractive hybrid. The flowers are spotted red over a creamy white ground. The lip is more heavily spotted with golden brown and fringed pink. Parentage: *Cymbidium wiganianum* x *C. insigne*. Shown by Messrs. J. and A. McBean, Cooksbridge.

THE NAMING OF SWEET PEAS.

I AM disposed to think that those who raise or introduce new Sweet Peas might exercise a little more pains and care in the naming of them than is now the case in some instances; and when the Editor asked me to write something for the Sweet Pea Number of THE GARDEN, it gave me a welcome opportunity of pleading for this to be done. As an instance of what I mean, I think that perhaps among this season's novelties that fine variety Barbara has taken my fancy more than any other; but why not a more distinctive name? The particular Barbara after whom it was named may be, and no doubt is, for all I know, a very charming and accomplished young lady; but the name Barbara alone conveys nothing to "the man in the street."

I wonder when people will begin to realise that a well-chosen and applicable name is of considerable commercial assistance to the Sweet Pea, as, indeed, to all flowers. I remember a talk I once had with a very eminent hybridist, complaining bitterly of the ugly name that had been given to a plant purchased from him. "Why," he exclaimed, "I wouldn't buy a flower with such a name!" and it may astonish some of your readers to know that the British public has, after all, an innate sense of the "fitness of things," and that a good name is often of distinct assistance to a flower in the commercial sense.

Take a name like Afterglow. Here is a plant excellently and appropriately named, the name conveying to us the colour character of the flower. On the other hand, the constant and monotonous practice of naming Sweet Peas after individuals more or less well known may be a compliment to the individual in question, but is infrequently one to a good Sweet Pea. If, however, this has got to be done, in the name of good taste pray let

it be done with judgment, *i.e.*, do not give the male friend you wish to honour a daintily and delicately coloured flower, nor to the lady a bold and brilliant one. "Give a dog a bad name and you may as well hang him" is perhaps a rather strongly-worded adage, but it applies to Sweet Peas with rather more force than the ordinary observer realises. F. HERBERT CHAPMAN.

THE FRUIT GARDEN.

HOW TO GROW GOOD MELONS.

DURING the last few years the Melon has become much more popular than it used to be. This is no doubt due to the many different ways it is served at table, both as a sweet and dessert fruit. Last year was an ideal one for the culture of Melons, and I do not remember the flavour of the fruits being so consistently good as was the case during the whole of the season. In such a season the frame culture of Melons might successfully be practised by anyone possessing a cold frame; but such seasons are very rarely experienced in this country, and to grow fruits of the highest quality it is necessary to have artificially-heated houses or pits.

Sowing the Seeds.—We sow our first batch during the last week of the year. From this sowing we cut the first ripe fruits from the middle to the end of April. Successional batches are sown at monthly intervals up till the beginning of July. This last sowing supplies ripe fruits till the end of October.

The Best Soil.—The soil we find most suitable for the Melon is rich fibrous loam, with a good sprinkling of old mortar rubble. The bed is made with whole turves, except the centre, for which chopped turves are used for the convenience of planting. It is most important to build the bed quite close to the roof glass, so that the plants do not become drawn and weak. Their fruiting season will be also very much accelerated by so doing. Our plants are grown with one single stem, and no effort is made to fertilise the flowers till there are three or four open on each plant. In this way we obtain an even set of fruit over the whole house. All lateral growth must be kept pinched out after the fruits have set.

Manuring.—We never find it necessary to apply stimulants of any kind till the fruits are freely swelling, when a little liquid cow-manure, alternated with a light sprinkling of *Le Fruitier*, is given. During the final stages of growth, cow-manure is given with increased strength. The minimum temperature should be kept above 65° if possible. During bright, sunny weather it may rise to 85° or 90°, so long as there is a little air at the top of the house. The house should be closed quite early in the afternoon, after spraying the plants and charging the house with moisture. The plants revel in such an atmosphere. It is a difficult matter to say which are the best varieties, but the one which finds most favour at the Royal table is Veitch's *Eminence*, and it is the best-flavoured Melon I know. It belongs to the pale-fleshed section. Its constitution is very robust and it is a free setter. Of the green-fleshed kinds *Shamrock* may be thoroughly relied upon, and *Scarlet Queen* is undoubtedly one of the very best scarlet-fleshed kinds.

Royal Gardens, Frogmore.

E. HARRISS.

[Our illustration represents an exhibit of a new Melon known as *The Manchester Melon*. This

exhibit was staged at the National Vegetable Society's show on August 30 last year by Messrs. Dickson and Robinson of Manchester, and fruits tested by the judges on that occasion were considered of excellent quality. It is a red-fleshed variety, with a beautifully-netted skin.—*Ed.*]

SWEET PEAS IN THE NORTHERN COUNTIES.

SITUATED in a somewhat isolated position in the North-West of Lancashire, it will doubtless interest many readers, more particularly those in the South and Midlands, to know that in the North Lonsdale district, of which Ulverston is the centre, there exists a large and keen body of Sweet Pea growers, and I venture to say that nowhere in the rural portion of England (having regard to area and population) can there be found a more earnest, up-to-date and enthusiastic body of gardeners, both amateur and professional.

This go-ahead spirit in growing Sweet Peas is due, in a large measure, to the encouragement given to growers by the North Lonsdale Rose Society, who this year are catering for Sweet

according to the nature of the land. Here we are favoured with good land, plenty of soil and a pure atmosphere. We do not always enjoy the balmy breezes of the South, as growers know that even in May we may expect frosts, and consequently we know the value of thoroughly hardening the plants before putting them out in April.

Among local growers I find that practically all the grandiflora varieties have been discarded, and up-to-date waved varieties are greatly in evidence; and the keenest of friendly rivalry exists between growers as to who shall turn out the best flowers at the local shows.

The intensive culture system has also been taken up by some of the leading growers; but although greatly advocated by many of the Southern "stars" in the Sweet Pea world, I do not think that it will become popular with us in the North, as, quite independently of the time that such a system takes, the few fine flowers produced are not ample return for the great sacrifice of bloom which such a system entails. As many of the local growers, particularly gentlemen's gardeners, have to grow for garden decoration as well as for exhibition, with them the intensive culture system is not a success, on account of the bareness produced on the lower portion of the plants.



THE MANCHESTER MELON, A NEW RED-FLESHED VARIETY OF EXCELLENT FLAVOUR.

Peas more than ever. At the society's next annual show (which is its twenty-ninth), to be held in July, the classes for Sweet Peas will constitute a record, and, I think, will be equalled by no other provincial society in Britain. For Sweet Peas alone three silver trophies, four gold and five silver medals, and one bronze medal are offered, in addition to over sixty pounds in cash. Since the formation of the National Sweet Pea Society, this locality has done its share in spreading the Sweet Pea cult, and our local society was the first to be honoured with the provincial show of the National Sweet Pea Society.

As I stated at the society's annual meeting in London, no more fitting district could be suggested for the Northern trials of the society, as it can offer the best of land, the purest of air, and is easy of access for both Scottish and Irish growers, to say nothing of the huge body of Sweet Pea enthusiasts in Yorkshire and Lancashire. I am sanguine enough to hope that these trials will be held in this locality in 1913, if the feeling of the annual meeting referred to is any criterion.

I do not propose to go into the details of cultivation, as this has been described in your columns over and over again, and is much the same throughout the country, differing, of course,

I find that throughout the district the system is adopted of raising all seeds in pots towards the end of January or early in February, and all plants are out in their permanent quarters by the middle of April. There is quite a keen demand for novelties every year, and very few gardens will be found in this locality where several of the newest varieties cannot be found. In my own case, as an amateur exhibitor, in addition to growing large quantities of twenty-five standard varieties I am this year growing at least thirty of the 1912 productions; and I find from the great number of gardening friends who visit me during the flowering season that these novelties are not only a source of pleasure, but act as an education and an impetus to the enthusiasm of other growers.

In conclusion, I may say that want of time and the value of space prevent any further elaboration of this article; but, as secretary, I would extend a hearty welcome to growers from all parts of the country to visit the North Lonsdale Society's exhibition in 1912, more particularly as exhibitors. They will then be able to judge for themselves the high standard of cultivation in Sweet Peas which prevails throughout this Northern district, and which, I venture to say, would do credit to many shows held in much larger centres.

Ulverston.

F. J. HARRISON.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" column a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

NOTES OF THE WEEK.

A Useful Speedwell in Winter.—The Cypress-like Speedwell, *Veronica cupressoides*, is one of the most attractive of the shrubby Veronics for the rock garden, and it is specially valuable during the winter months. At that time the value of the low-growing evergreen shrubs is always recognised, and especially those of a class like *V. cupressoides*. It is probably as frequently met with as *V. salicornioides* as under its correct name—that given above—but there can be no doubt of the proper one. It is a dense, freely-branched bush, slow in growth, and lasting for years in a dwarf state. Plants of about six inches high may frequently be met with which have grown little for a number of years. The flowers are violet, but the plant is shy of blooming. The dwarfiest variety is called *V. e. variabilis*.

The Alpine House at Kew.—For many years past this has been one of the most popular features of the Royal Botanic Gardens throughout spring, for whenever it is visited many choice and interesting plants are to be found in flower. As it is unheated, hardy subjects only are on view; but it is the means of exhibiting many flowers at their best which would probably be injured by inclement weather out of doors. Although it cannot be expected to be at its best for several weeks to come, it is already assuming a gay appearance, and among other plants the following were noted in flower on the occasion of a recent visit: *Crocus Sfeberi*, *C. chrysanthus*, *C. alatavicus*, *C. Fleischeri*, *Cyclamen ibericum*, *C. Coum*, *Ornithogalum Haussknechtii*, *Narcissus bulbocodium monophyllus*, *I. reticulata histrioides*, *I. Danfordiae*, *I. Tauri*, *I. alata*, *Adonis amurensis*, *Eranthis cilicica*, *Saxifraga Grisebachii*, *S. burseriana grandiflora* and *Merendera caucasica*.

A Winter-flowering Greenhouse Plant.—At one time the various species of *Chorizema* were among the most popular of winter and early spring flowering greenhouse plants, but, unfortunately, they are somewhat of a rarity in the present day. They are, however, well worthy of reintroduction to those gardens where their culture has lapsed, for, in addition to bearing very showy flowers, they last in good condition for several weeks. *C. ilicifolium* is one of the most floriferous and easily grown. It may be rooted from cuttings inserted in sandy peat in a close frame during early summer. The young plants ought not to be allowed to flower the first winter, but be kept well cut back in order to obtain a good foundation. In most instances nice serviceable plants in 4-inch pots will be available for the following winter, but the succeeding year plants 2 feet to 3 feet high, with many branches, may be obtained. The Pea-shaped flowers are orange and red in colour, and

they are borne in racemes from the lower parts to the points of the branches.

***Pernettya mucronata*.**—The virtues of this ericaceous shrub do not appear to be so generally appreciated as they ought to be, for there are few shrubs which are so worthy of being planted as this one, for three distinct features. First, it is a neat evergreen with small leaves and comparatively low growth; secondly, its small, white, bell-shaped flowers are very pretty in May; and, thirdly, its bright-coloured fruits are very attractive during autumn and winter. It is a native of the Magellanic region, and grows 1½ feet to 2½ feet high, spreading by means of suckers. Under cultivation a good deal of variation occurs in the colour of the fruits, and a number of the most distinct have been selected and propagated by nurserymen.

Carpeting Bulbs in Pots.—A considerable improvement is accomplished in the appearance of Hyacinths and other bulbs grown in pots if the surface of the soil is carpeted with some dwarf plant, the fresh colouring of the carpet being much prettier than that of the bare earth. Some of the Selaginellas have been employed for the purpose, that useful variety, *S. denticulata*, being one of the best and most easily cultivated. The Selaginellas may be grown in other pots and planted in those containing the Hyacinths when the latter are taken indoors for blooming. Another good plant for the purpose is the common *Oxalis* of our woods, which is a most pleasing room plant and is excellent for carpeting such bulbous plants as are grown in pots. *Arenaria balearica* is sometimes met with as a carpeter.

A Disease of Sweet Peas, Asters and Other Plants.—Under this heading Mr. G. Massee in the last issue of the *Kew Bulletin*, deals with the disease that has become so closely associated with the Sweet Pea in recent years. Apparently the disease, *Thielavia basicola*, does not limit its attentions to the Sweet Pea, but will also attack Asters, Orchids and various other cultivated plants, more especially during the seedling stage. So far as the Sweet Pea is concerned, it is well known how very conflicting and confusing are the opinions of expert growers, a fact that was fully borne out in a recent conference held under the auspices of the National Sweet Pea Society. Mr. Massee states that it is practically impossible to cure a plant once it is attacked, and that the infection of a new area is in the majority of instances due to the use of manure, on which material the fungus flourishes and reproduces itself at a rapid rate. Commercial formalin (= 4 per cent. formaldehyde) is recommended as a most effective fungicide for sterilising infected soil. When green manure is dug into land intended for seed-beds, it is advised that it should previously be thoroughly watered with formalin as above.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Calceolaria fuchsiaeifolia for Winter Use.—I used to know this pretty Calceolaria by this name, but it is now, I am told, called *C. deflexa*. It is a good bloomer for the greenhouse during winter, as, with the common temperature afforded in such a structure, it bears its blooms freely during all the winter months. It has dropped, to some extent, out of cultivation, but I saw some nice plants of it the other day, and these have prompted this note.—A. M. D.

Hamamelis mollis.—My experience this season of this charming shrub is much the same as that of Mr. Beckett, as mentioned on page 46 of the issue for January 27, although the specimens here are much smaller than his, being about three feet high and two feet through. They were planted three years ago, and flowered last season for the first time; they were then in flower before Christmas. This season they are, at the time of writing (January 31), only just commencing to bloom, although the plants are well set with flower-buds. *Hamamelis arborea* is much earlier; it was in full bloom before Christmas, and so far appears to be much freer than *H. mollis*.—A. GRANT, *New Place Gardens, Haslemere*.

Fixed Stocks of Sweet Peas.—I was very pleased to see one of the writers in your Sweet Pea Number, dated February 3, refer to the necessity of Sweet Pea growers getting the best stocks of Sweet Peas and not letting them deteriorate, and also to get them true. There is nothing more annoying than to give a big price for a novelty, and when you have put yourself to a lot of trouble to grow it to find you have got a mixture, with a sprinkling in it of the variety you wished to purchase. I well remember purchasing *Miriam Beaver* when it was first introduced, and when I put the blooms up for show I found that everyone else had a different shade of *Miriam Beaver* to mine; in fact, I found out later that I had only one true plant out of the packet. Some firms are much more careful that their stocks are true than others, and they are the firms to patronise. My opinion is that the grandiflora or plain hooded type is doomed unless there is something exceptional in colour to recommend it, but for beauty and grace the waved varieties are unbeatable.—H. H. KNIGHT, *Scematon, Dawlish*.

The Improvement of Sweet Peas.—I am constrained again to take up my pen—I had almost said cudgel—to deal, with your kind permission, with a point raised by Professor Biffen in his article under the above heading in your issue for February 3. He says: "We still lack Spencer forms of the Bush and Cupid types. To raise them is the merest child's play. All that is necessary is to cross. . . . These Spencer Cupids possess all the bad features of the old type. The Bush types, too, still require support, and are worthy counterparts of the old type." If we still lack Bush and Cupid Spencers, how can it be said that "these Spencer Cupids possess all the bad features," &c.? May I point out that in my dwarfs I have obtained Spencer forms which, unlike the Cupids, do not shed their buds, nor, unlike the Bush varieties, really are dwarf. To produce them, however, was not the "merest child's play." If it had been, others whose operations may, perhaps, fittingly be so described would have raised them

before now. But I will merely say that I did not cross anything with any Bush or Cupid variety.—HILDA HEMUS.

The Paris Wallflower.—I was pleased to note the reference to Parisian Wallflowers on page 31 of THE GARDEN for January 20. I am quite in favour of the same, and wonder it is not more used in English gardens. Although not commonly grown around here, so far as I have seen, I had no idea of its scanty reception in our country generally. I have grown it on and off for years, and have had, and still have this season, plants of this variety blooming freely and cheering the dark, dull days with their bright, fragrant blossoms.—STEPHEN STOOT, *The Gardens, Comprigney, Truro*.

The Winter Jasmine.—I have never seen *Jasminum nudiflorum* flower more freely than it has during the present winter, and it has had the most beautiful effect in positions where the plants have been neglected as regards pruning. I refer to shrubberies and old buildings, where I have seen plants growing almost in a wild state. In some instances the branches have become mixed with those of evergreens, and the effect is charming. No doubt the heat of last year ripened the wood well, and the mild weather and general moist atmosphere have been favourable to the free bursting of the flower-buds. To me the yellow of the flowers has never seemed as rich before.—B.

The Crocus.—In the "Song of Solomon" the Crocus is called the Saffron, Spikenard and Saffron, Calamus and Cinnamon, with all trees of Frankincense, and its colour is indeed truly described in the word, its wonderful saffron shining in the glory of the February sun. It is said there is no other colour like it in Nature, save only the early tints of the dawn. Homer has sung of the morning as "saffron-robed," and an old Persian poet wrote:

And night grew grey, and feared the desertion
(The desertion of her love, the starry heavens),
So she dipped her hair into saffron.

And because only the dawn can equal it in beauty,
the Crocus is proud indeed.

Hail, many-colour'd messenger, that ne'er
Dost disobey the wife of Jupiter;
Who with thy saffron wings, upon my flowers
Diffusest honey-drops, refreshing showers.
—SHAKESPEARE.

—WILLIAM KITLEY.

The Modern Sweet Pea.—It was with the greatest interest I read your paper dated February 3, devoted as it was to my once favourite flower, and at last discovered therein the long-sought names of the men to whom we owe the deplorable destruction of the original type of that once beloved blossom, now, alas! long robbed of its true form and fragrance. With many another amateur I have privately lamented the loss of the Sweet Pea as we knew and loved it some thirty years ago, and heartily despise that deformed and too often scentless flower that now bears its name. While willingly admitting the great improvements in size and in variety of hues, we mourn the trim and dainty shape of the old Sweet Peas with their delicious and powerful perfume. Cannot some clever modern florist restore to us the sweet and shapely blossom of bygone days, with the addition of the admittedly charming colourings of the flower which now bears the misnomer of "Sweet" Pea? With what delight it would be welcomed! How strange it seems that, just as the beloved Elia owned he had "no ear," even so many modern florists seem to have "no noses." For it is not only the (once Sweet) Peas that have

suffered loss, but many a much-vaunted modern Rose is open to the same reproach.—AN AMATEUR.

A Plague of Slugs.—I am a jobbing-gardener in Brockenhurst. At one place I go to I work three days a week. When the people engaged me, they said they could get nothing to grow. When I commenced work, twelve months last June, I soon found out the cause of it—the ground was overrun with slugs. I at once started laying down Cabbage leaves, but I found I could not catch many slugs in the summer months; but as soon as winter came I found that I could catch as many as six or seven hundred a day. One day last February I caught over nine hundred. Up to the time of writing I have caught 18,700 slugs in this way in less than two years. I have been told that slugs go underground in the winter. They are no more underground in the winter than in the summer—that is, if they can find shelter under Cabbage leaves—unless it is in frosty weather. As the Cabbage leaves decay I take them up and lay down fresh ones, not only in one place, but in different places over the garden, and look them over about three times a week. I always pick up and destroy the eggs of slugs.—C. PLACE.

The Auricula.—I was interested in "F. R.'s" remarks on the above plant, and suggest the following as accountable for its comparative rarity in ordinary well-stocked gardens: Polyanthuses and garden Primroses have made such headway with the public during the last few years that I think it possible they take the place, with many people, of the Auricula. Roughly speaking, I should think the growers of Polyanthuses and Primroses are as ten to one of Auriculas, added to which the former are far more floriferous and, on the whole, easier to manage, though they lack those exquisite velvety markings so grandly seen in the Auricula. Regarding keeping them in winter, we, being on cold soil, have always found it best to take them up and box them. We have kept them in excellent condition by heeling them in boxes and keeping the latter in perfectly-open sheds, only covering with a mat or bag on frosty nights. They needed an occasional watering owing to such airy conditions, and we chose mild, bright mornings to apply it.—C. TURNER, 1, *Castle Terrace, Muswell Hill, N.*

An Error in Sowing Small Seeds.—The plan generally adopted for sowing small seeds is, to my mind, wrong. First of all, the receptacle is filled with soil, which is made firm and the surface pressed flat. The seeds are then sown, followed by a light sifting of soil, which is again pressed and the whole surface made firm. The seeds in due course are watered by a rosed-can or dipped. The surface in many cases afterwards becomes slightly dry. It is then that the soil which was pressed down over the seeds forms quite a hard crust, and after the germination of the seeds has taken place, the small seedlings fail to push through the crusty surface. The method which I practise—and always with the best results—is as follows: Fill up the pots, pans or boxes with soil, smooth the surface, but do not press it, sow the seeds, after which press them firmly into the soil; then sift a little soil over them and the operation is completed. The pressing of the seeds into the soil secures them in the first place, and with anything like ordinary care there is no fear of the seeds being washed out when being watered. The soil sifted on the top of the seeds and allowed to remain quite loose does not frustrate the growth of the small seedlings.—A. ALLARICE.

Protecting Trees from Hares.—I noted in your issue for January 20, page 30, "C. R. L." asking if anyone knew of any method to prevent hares from eating fruit trees, Roses and other plants. I have been troubled in the same way with them, but have found that Renardine, supplied by Gilbertson and Page, Limited, Hertfordshire, at 3s. per quart, will keep hares, rabbits or even foxes away if string is steeped in it and run round any plants likely to be attacked. Instructions for use are on the tins.—C. S.

Improving Gravel Paths.—At this period of the year a deal of attention is usually directed towards the garden walks. A method of improving them we have occasionally practised is to prick up the paths with a strong pronged fork. The surface is then left loose for a time in order that rain can clean the gravel previous to re-rolling firm again. Of course, the paths are further improved in appearance if the slightest sprinkling of fresh gravel is incorporated with the old before being rolled down. The effect of forking up only is really surprising, and I strongly recommend this simple expedient to anyone whose walks are looking shabby or dirty yet are not really in need of re-gravelling.—C. T.

Eucharis amazonica.—I am sending you a photograph of a pot of Eucharis Lilies. The species, I believe, is Eucharis grandiflora, generally called E. Amazonica. The bulbs were brought home by Mrs. John Biddulph from Trinidad in March, 1903. I am not quite sure what treatment they received previous to five years ago. Since then they have been grown in a temperature of 55° during the night, rising during the daytime by 5° or 10°, according to the amount of sunshine. They have not been disturbed at the root more than was necessary in attending to the drainage, and have been given an occasional top-dressing, with a compost of loam, a little leaf-soil and silver sand. They are given occasionally some weak cow-manure-water and soot-water alternately. You will notice that all the flowers are not fully out, but the plant has thrown up six good spikes, each with five blooms, and now that they are fully developed the plant is quite a picture. We generally get two lots of flower a year from them—at Easter and again now.—EDWARD MONTAGUE, *The Gardens, Grey Court, Ham, Surrey.*

Grafting and Fruit Trees.—Two notes in the issue of THE GARDEN for January 27 excite my curiosity. The first was on the origin of a Pear, called Backhouse Beurré, which, we are told, on the authority of Messrs. Backhouse and Sons, York, "was the product of a graft of Beurré Diel upon a Jargonelle." Are we to understand that this Pear is what is known as a graft hybrid, and, if so, what proof is there of this? May it not have been a hudd sport? The second note is on "Depth to Plant Fruit Trees," in which it is more than suggested that grafted trees do better when they are planted deep enough to enable the scion to root "on its own." If there is anything in this, what chance have standard grafted trees? Surely there are hundreds of proofs that, provided stock and scion are of the right affinity, the distance of their union from the roots makes no difference. Should the stock be unable to keep the scion going all the time, there is a good reason for planting the graft low enough to allow the scion to take root,

in which case the stock only plays the part of wet-nurse. Of course, trees, even when on their own roots, may suffer through not being planted deep enough, and I suggest this as the explanation of the behaviour of the Apple trees at Great Bookham. It would be interesting to ascertain if these trees did root above the union, that is, from the scion, though that would not be conclusive on the point raised in "D.'s" note.—W. W.

Lilium Martagon dalmaticum.—All cultivators of the Lily ought to grow the Dalmatian Lily (*L. Martagon dalmaticum*), which is one of the finest of our varieties of the old Turk's-cap Lily. It is very distinct in appearance from the ordinary one, the most noteworthy points about it being its long, symmetrical spikes and its broad, pointed leaves, together with its tall stature and graceful habit. Its height is sometimes 6 feet and even 8 feet, and a good coloured form of a deep blood,



EUCHARIS AMAZONICA GROWN FROM BULBS IMPORTED FROM TRINIDAD.

almost mahogany red, is very fine indeed. As now sold we seldom see any variety of colour in the plants, but the variety *Catanæ* or *Cattanæ*, called by some a variety of *dalmaticum*, is still darker, being of a deep purplish claret. There are lighter-coloured forms of *dalmaticum* in existence, but these are not often offered.—LILIOPHILE.

FORTHCOMING EVENTS.

February 12.—United Horticultural Provident and Benefit Society's Committee Meeting.

February 13.—Royal Horticultural Society's Annual Meeting at Vincent Square, Westminster, 3 p.m. No show on this date.

February 14.—East Anglian Horticultural Club Meeting. Lecture by Mr. W. Messenger on "Chrysanthemums and Their Culture."

February 15.—Linnean Society Meeting.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

(Continued from page 36.)

The Best Varieties.—This is a very important question to consider in relation to the growth of this fruit for market. This lesson has been well driven home to us by Colonial and American growers. Unlike English growers, who have grown varieties of Apples by the hundred, most of them useless in comparison with the best, our cousins across the sea have confined themselves to very few sorts, and these mostly of attractive colour and large size. Once they find out the sorts favoured in English markets, they grow these by the ton; they grow little else. As an early August dessert variety the old Devonshire Quarrenden is hard to beat. The tree, although not an overstrong grower, lives to be old and forms a grand orchard tree. The colour of the fruit is distinct and attractive, and its flavour sweet and delicious. The variety is a free and consistent bearer. It is a favourite with everybody, and meets with a ready sale in the market. Later I hope to discuss the merits of a few more varieties, both dessert and cooking, for market and for private use.

The Apple as a Commercial Crop has never had a chance in this country. It has in the past been looked upon, more or less, as an article of luxury, and little thought, practical knowledge or intelligence has been brought to bear on its growth in this connection by agriculturists. A change in this respect is slowly but surely taking place, and the Apple, I am convinced, by its commercial value and its intrinsic merit as a food, will play a more important part among the products of the soil of Britain in future years than it has done in the past. I base this statement on the fact that England is perhaps the best market in the world for the disposal of this fruit, that the English people love a good Apple, and that our soil and climate suit its growth to perfection. Our imported Apples, if we except Newtown Pippin and two or three other sorts (which are sold at prohibitive prices), are soft, sleepy, tasteless, and not to be compared with the sweet, juicy, crisp and toothsome English Apple. It is hard to understand why men of means, youth and

energy will go to British Columbia and other places abroad to engage in the growth of this fruit, when by expending the same energy, labour and capital in this country a better return on the outlay would be secured. Provided that there is sufficient depth of soil from which the tree can draw sustenance and make healthy growth, the Apple is not particular as to the soil or subsoil it is planted in, provided it is well drained. It will succeed on chalk, gravel and even clay subsoils; but the ideal soil for its perfect growth is a deep, loamy soil, neither too light nor too heavy. As to climatic conditions, it thrives better, we know, in some counties than in others, where the conditions all round are more to its liking, such as is the case in Kent, Sussex, Worcester, Hereford and others; but that county must be a benighted one in which the Apple will not make a brave bid for success, especially if the varieties are judiciously selected.

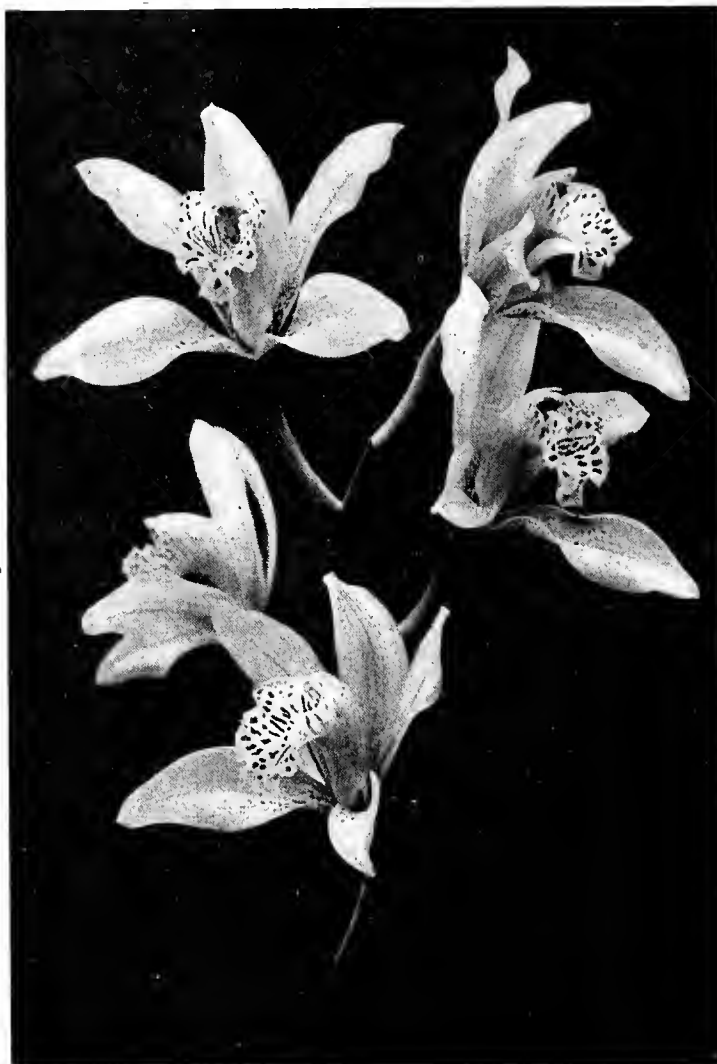
The Selection of a Site and Shelter.—In a large orchard of many acres, the question of shelter is not so important as it is in the case of a small one, as the trees in the former plantation will naturally protect themselves in time. Where shelter from north, north-east and east winds is necessary, one of the best shelter trees to plant would be the Damson, planting the trees fairly closely together and giving a good depth to the plantation. A too high and bleak situation must be avoided, as well as one which is too low. The former would expose the trees and fruit to damage from wind-storms, and the latter position to destruction of the bloom by frost.

Preparing the Land for Planting.—It has been proved over and over again that Apple trees planted on arable land will make better progress in six years than they will in ten years when planted on grass land. This bad effect which grass has on the growth of Apple trees may be mitigated and reduced by preserving the 5-foot surface of open soil over the roots free from any other growth whatsoever, and extending its area as the tree progresses in growth and age. It will be well to make it clear to the inexperienced that it would be courting failure to plant Apple trees for profit on land which had less than eighteen inches of good loam for the trees to root into, and I may further suggest that it is always better for a man who is not well experienced in the matter to consult an expert possessing thorough practical knowledge of the growth of the Apple before embarking on the business.

Bushes or Standards.—There is something to be said for both. I notice that in some parts of Worcestershire standard tree planting largely prevails. This system offers a freedom of extension and of natural growth which the bush trees do not, and the trees in time attain a much larger size and retain their vigour and health for a longer time. Moreover, they require much less pruning and looking after once they are established. Bushes, on the other hand, have the great advantage of yielding a profitable return in much less time than the standard trees. Another advantage is that more than double the number of trees can be planted per acre, and the labour of gathering is considerably reduced. Of course, for small gardens, where a quick return is always desirable, bush specimens will be most favoured, but, as I have tried to point out, the choice of standards or bushes must depend largely upon circumstances, and the purpose for which they are required.

Planting the Trees.—A long season is available for planting, that is to say, from the first week in November until the last week in February. Some growers lay great stress and importance on planting early. It is a good plan, no doubt, but I have

planted successfully at all times between those dates. What is of more importance than dates, in my opinion, is the thorough preparation of the soil beforehand, and to be specially careful that it is not in a wet and sodden condition at the time of planting. Having got the holes ready, place the poorest of the soil at the bottom, reserving the best for the top spit of 9 inches, in which the roots will be planted and in which we wish them



A NEW HYBRID CYMBIDIUM: C. SCHLEGELII (MUCH REDUCED).

to remain, rather than that they should penetrate to the bottom poor soil. The question of mixing manure with the soil at the time of planting is one upon which growers differ. My experience in this matter has led me to the conclusion that if the soil is of a rather poor and light description, it is an advantage to add half a barrow-load of rotten manure to the soil of each tree at planting-time. On the other hand, if the soil is a sound, substantial loam of a fair depth, it would be a mistake to apply manure at all, remembering that it is not strong gross growth we are aiming at in the early stages of the growth of the trees, but growth of moderate size and hard texture.

OWEN THOMAS, V.M.H.

(To be continued.)

THE GREENHOUSE.

A NEW CYMBIDIUM.

(C. SCHLEGELII.)

THERE are a number of handsome Cymbidiums in cultivation, and no collection of Orchids would be at all representative without them. The latest acquisition to the genus is *C. Schlegelii*, a hybrid raised by crossing *C. wiganianum* and *C. insigne*. As described in our last issue under "New and Rare Plants," the flowers are spotted red over a creamy white ground, and the crimped lip is more heavily spotted golden brown and fringed soft pink. It was recently shown before the Royal Horticultural Society by Messrs. J. and A. McBean, Cooks-bridge, when it received an award of merit. It is a beautiful hybrid of elegant habit.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

It is quite possible that some amateur cultivators may have had losses among their cuttings in cool structures owing to the excessive atmospheric moisture. The wise man, however, always puts in a few more cuttings than he will require plants (except of the new and rare varieties) so as to have a stock of young plants to select from. The losses would occur mainly in structures wherein there was a low temperature, such as unheated greenhouses and frames.

Well-Rooted Cuttings.

Directly these are removed from the propagating-frame they will show signs of distress if placed near ventilators or in any direct draught; and when the leaves droop, the cultivator must not apply water unless the soil is getting rather dry. If it be fairly moist, syringe the foliage with a fine spray not later in the day than two o'clock in the afternoon, so that by night the leaves will again be dry. When the soil really needs water, give sufficient to moisten it all through; there is

not much bulk of soil in the small pots, but at this season it does not dry up quickly. If some plants are to be potted on a certain day, the soil should be watered at least twenty-four hours previously, as it is a mistake to water and repot forthwith at this season.

The First Potting.—Of course, I scarcely need to remind cultivators that the pots and crocks must be washed and well dried before they are used. If the soil adheres to the sides of the pots, many roots will be destroyed at the next repotting. Inexperienced growers may not have realised this fact. In the January notes some advice was given on the matter of compost, the ingredients suitable being stated. I recommend the removal of much of the loose soil from the tiny ball, so long as it

does not unduly expose the tender roots. The latter must be kept well up in the new pot ; do not bury the stem any deeper than is absolutely necessary for the firming of the plant. Gently press down the new compost with the fingers, and then place all the plants closely together on a stage near the glass, lightly syringing in the morning, and if the sun shines brightly, put a sheet of newspaper on them. In the course of a day or two a watering will be necessary, and at the end of a week place the plants further apart. From this stage they may be grown very sturdily, especially if carefully ventilated.

Young Plants in Houses and Frames.—Cuttings rooted in a bottom-heat are much more tender than those propagated on a cool base. A longer time is needed for the latter to root in ; but when once roots are formed the plants grow apace, and are not subjected to any severe checks if a cold spell of weather comes. The former are, and consequently it is not advisable to put them in a cold frame as early in the year as the others. Undoubtedly the best plants are those which are grown slowly but steadily in a cool frame after the middle of February, so that amateur cultivators need not hesitate to place them in such a structure then. Keep old roots with cuttings for March and April propagation in a light, cool position. AVON.

FLOWER GARDEN.

THE GIBRALTAR CANDY-TUFT.

VERY welcome at this time of the year is any plant that produces its flowers in spite of the adverse conditions usually prevailing. The white variety of *Iberis gibraltarica* is one of these, and the past mild winter has been favourable for its development. The plants shown in the illustration are planted on the top and between the layers of stone in a wall, and commenced to flower about the middle of December. The photograph was taken in the second week of January. This Spanish plant is one of the largest of all the Candytufts, and there are two varieties in cultivation. One has flowers of delicate lilac in good-sized heads, which blooms later on in the spring. It is not so hardy as the white variety, although it grows freely in many places. Like all the other members of this useful family, the subject of this note is easy to grow, and will succeed in any sunny position in well-drained loamy soil. It may be propagated by means of cuttings in summer, and it also produces seeds. Like other members of the genus, it is evergreen. If allowed to grow in large clumps, it is most effective, resembling patches of snow when the flowers are well expanded. W. I.

GROUPING HARDY ANNUALS FOR COLOUR EFFECT.

VERY pleasing effects may be made with annuals alone, or in conjunction with other hardy plants, from the standpoint of colour simply. I have seen in two distinctly different gardens very beautiful effects made with varied shades of blue in one case, and that near to the sea ; and in another with varied shades of pink and mauve, these latter being kept quite apart, although they might have been blended together. To enumerate what might be done in this way in full would take more space than can be afforded ; but the suggestion made may be the means of setting garden-lovers thinking of what may suit their individual tastes, and with a careful selection be suitable to the situation or locality.

Blue-flowered Annuals.—I will enumerate a few blue-flowering annuals that may be so used.

the blue shades only ; Sweet Peas, the pale blue, lavender, heliotrope and dark blue shades ; *Brachycome iberidifolia*, the blue shades, suitable alike for beds and rockwork ; *Centaurea cyanus*, in the blue shades ; *Eutoca viscida*, a beautiful shade of blue and of compact growth ; *Phacelia campanularia*, an annual well deserving of extended culture ; *Nemesia hybrida* Blue Gem, which I have recently heard well spoken of ; and *Nemophila insignis*, bright blue with white eye.

Pink Flowers.—In shades of pink there is also a good choice, but probably not quite so many dwarf-growing plants. Here Sweet Peas will provide a wide range of colour. I have seen these used with a lovely effect in conjunction with *Clarkia elegans*, *C. pulcherrima* and *C. integripetala*. These, if well cared for, will last a long time in flower. The pink shades of the Candytuft will supply an excellent variation of rather dwarf plants, also lasting well if not grown too thickly. The pink forms of *Aster sinensis* will serve a useful purpose, especially late in the season. There are also varied shades of pink to be found in the *Godetias*, bordering somewhat on to rose, no doubt, but still admissible. *Lavatera splendens rosea* is a distinctly useful annual of robust growth, better in a poor soil than otherwise. The shades of pink in *Phlox Drummondii* further enhance the list. *Viscaria elegans picta*, as a somewhat dwarf plant, is useful and distinct ; *Silene compacta* varieties, as prostrate-growing annuals, are very effective.

Yellow and Orange Flowers.—

In varied shades of yellow and orange there is a wide choice, notably among the *Calliopsis* (or *Coreopsis*). The dwarf-growing and somewhat prostrate *Zinnia baageana*, in three or more shades, are valuable, not only from the point of effect, but also for their enduring character. The dwarf-growing *Marigolds*, also the *Tagetes*, are very effective and last a long time in flower. In *Dimorphotheca aurantiaca* we have an extremely useful yellow annual, and one that rather enjoys a dry situation. Of this annual and *D. pluvialis* we have also this season, offered for the first time, a choice selection of new hybrids, all of which will, I think, blend with the yellows. If they do not quite come up to the coloured plate that I have seen, they will still be beautiful. It would be quite possible to add many more annuals in shades of yellow, but any reliable catalogue will supply a further choice.

Crimson-Coloured Annuals could easily be found in a seed catalogue. Among these the *Coreopsis* will be found most enduring, likewise *Linum grandiflorum coccineum* and *Viscaria cardinalis*. In using these, however, I should, personally, be disposed to tone down the colour by using other annuals with white flowers. For fences where rapid growth is needed, nothing



IBERIS GIBRALTARICA IN THE ROCK GARDEN. THE PHOTOGRAPH WAS TAKEN EARLY IN JANUARY.

Viscaria cœrulea, a rather uncommon plant, pale blue in colour and one that lasts well ; *Anagallis linifolia cœrulea*, a *Gentian* blue, dwarf in growth, thriving better in poor soil ; *Linum perenne*, a lovely shade of blue, flowering for a long period, wants support ; *Linaria maroccana*, in the blue shades of colour and varied ; *Asperula azurea setosa*, light blue and fragrant ; *Aster sinensis*, in

surpasses the Tropæolums, from the yellow T. canariense to the T. lobbianum, in great variety.

JAMES HUDSON, V.M.H.

Gunnersbury House Gardens.

THE ROSE GARDEN.

GROWING ROSES OVER OLD FRUIT TREES.

IN many gardens throughout the country there are old fruit trees which, through neglect and other causes, are practically worthless from a productive standpoint, but which can, nevertheless be made good use of as supports for the majority of our Rambler

Roses. To be worthless for growing fruit does not of necessity mean that a tree has reached large dimensions; on the contrary, many which were grafted on dwarfing stocks will not be more than 10 feet to 12 feet high, an altitude that vigorous-growing Roses like the old Gloire de Dijon will quickly reach, providing the soil is well prepared before the Roses are planted. Then in many old kitchen gardens there are decrepit espalier trees on the walls—trees which if left alone will in a year or two become veritable eye-sores to their owners, who may, for some reason or other, not feel disposed to grub them up and replant others. If a Rose or two such as Claire Jacquier or Paul's Single White were placed near the foot of such trees and allowed to ramble at will between and over their branches, they would in a year or two create a picture of rare beauty such as no Rose, however well it may be grown, is capable of when trained more or less formally close to the wall.

The preparation of the soil for the Roses has been mentioned, but previous to this some little attention should be given to the fruit trees which are to act as supports. It frequently happens that the branches of old trees are packed closely together, and some may be badly attacked by insect or fungoid pests, or be in an advanced stage of decay. In overhauling the tree all such should be removed, leaving only sufficient of the strongest and most healthy branches to form the desired framework for the Roses. It will also be a safe precaution to spray the trees with a caustic wash made by dissolving 1 lb. of caustic soda and 1 lb. of soft soap in ten gallons of water. Although this has a burning effect on the skin, it can be sprayed on the trees during a still day without fear of serious injury to the operator, especially if a pair of thick leather gloves are worn.

When the trees have been overhauled, stations for the Roses should be prepared. The number of Roses to be planted against each tree will depend largely upon its size and whether the owner requires a quick display or is prepared to wait several

years. For a tree 10 feet high and about the same in diameter, two or three Roses would be sufficient for ordinary purposes, and these should be all of one variety, or at least varieties of one colour, although this is, of course, mainly a matter of individual taste. In some gardens, where the soil is naturally favourable for the growth of Roses, it may only be necessary to dig the whole over two spits deep and work a good dressing of partially-decayed manure into the lower spit. On the other hand, the soil may be sandy and poor, and where such is the case it is useless attempting to grow Roses unless it is removed and replaced by good loam. A hole 3 feet in diameter and not less than 2 feet deep should be taken out for each Rose, and this ought to be not less than 18 inches from the

the best effect the shoots should be allowed to ramble almost at will over the branches of the fruit trees, so that an informal combination is secured. Old fruit trees of this description frequently produce a quantity of flowers, and as these open in the spring, the combination is invariably most pleasing at two seasons of the year.

Practically all the wichuraiana Roses, as well as most other ramblers, are suitable for growing in this way; but perhaps as a guide it may be well to name a few. In addition to those already mentioned, use might be made of American Pillar, Dorothy Perkins, Gardenia, Hiawatha, Tea Rambler, Alberic Barbier, Jersey Beauty and the beautiful little multiflora simplex. There are many others that could be utilised where greater variety is desired.



ROSE PAUL'S SINGLE WHITE ON AN OLD PEAR TREE.

trunk of the tree. All tree roots encountered in the process should be chopped through with the spade or a hatchet; it is not necessary to deal ceremoniously with them, because the tree as a fruit-bearing unit is not needed. These holes should be filled with good fibrous loam of a rather unctuous nature, mixing with it, to within 1 foot of the surface, plenty of partially-decayed manure, with a quart of bone-meal and the same quantity of basic slag to each hole. Both are slow in action, and will provide a storehouse of food for the Roses to draw upon just when they most require it.

The planting of the Roses may be done any time during February or early March. To obtain

has frequently seen winter and early spring flowering plants being hard pruned in autumn. The Winter-flowering Jessamine is often a sufferer in this respect, as also is Forsythia suspensa. As the time is fast approaching when it will be necessary to prune certain shrubs, the following suggestions are given as a guide to the uninitiated.

When to Prune.—Shrubs which require pruning at all may be roughly divided into two well-defined groups, according as to whether the flowers are produced on wood ripened the previous year or on the current year's wood. Having decided to which group a shrub belongs, it is necessary to ascertain whether the plant requires annual pruning or no. This is a difficult point to solve,

TREES & SHRUBS.

WHEN AND HOW TO PRUNE ORNAMENTAL SHRUBS.

ALTHOUGH in some directions far too much pruning or clipping of shrubs is carried on, especially in small gardens, for the shrubs ever to be able to assume their true character and to blossom as freely as they ought to, yet, on the other hand, there are numerous instances where a little attention to pruning would be the means of adding a great deal to the beauty of the plant. In the first place, the pruner must know his plants and have a definite object in view when he commences pruning. Too often, it is to be feared, pruning comes in with the general clean-up of the garden in late autumn. Then everything receives attention, irrespective of the time of flowering, and only too often wood which would provide a wealth of blossom two or three months later if left untouched is ruthlessly cut away. This is not so much the case in places where trained gardeners are kept as in small suburban gardens, where a man is employed casually who may or may not have had any real garden experience. To him all things are alike, and the writer

for it may be that the condition under which the plant is growing proves the deciding factor. Thus, *Jasminum nudiflorum* growing against a wall or over a porch has to be kept within certain bounds; therefore it is usual to cut the secondary branches hard back to within an eye or two of the old wood as soon as the flowers are over. But the same shrub growing under other circumstances might be allowed to go unpruned for a number of years. As a rule, however, it may be taken for granted that a biennial pruning will be beneficial, for it will keep the plant open and free from dead wood. *Forsythia suspensa*, when grown as a bush or in a formal bed, must be pruned back to within two or three eyes of the base of the previous year's wood as soon as the flowers fade. When grown in a shrubbery, however, it may be allowed to go unpruned. Grown against a trellis, a certain amount of pruning is necessary, but it should be less severe than in the case of specimen bushes, for hard pruning is conducive to stiff, strong, upright branches instead of the long, pendulous branches which are associated with naturally-grown examples. *Prunus triloba flore pleno* is another early-flowering shrub which is benefited by having its side branches when growing against a wall, and its secondary branches when grown in the open, cut back after flowering.

Early-flowering Shrubs.—Taking other early-flowering shrubs, such as *Hamamelis*, *Daphne Mezereum*, *Spiræa arguta*, *S. Thunbergii*, *S. confusa*, *Prunus japonica flore pleno* and the various *Barberries*, no regular pruning is required; but it may be necessary to thin them occasionally, prune them into shape, or reduce them when they seem to be outgrowing their places. Any such work should be done as soon as the flowers are over. Of those named, the *Daphne* will require the least, and *Prunus japonica* the most, pruning. The last-named may require attention about every third year. All the early-flowering Heaths should be cut back a little when the flowers are over, and the majority of the Brooms will be improved by having their wilder branches shortened after flowering. With regard to Brooms, it must be distinctly understood that they cannot be cut back successfully into wood which is older than two years, while it is better not to cut below the base of year old branches. The *Winter Sweet* (*Chimonanthus fragrans*) when grown against a wall is usually spurred back after flowering, but when grown in the open no regular pruning is necessary. *Magnolias*, again, require no other pruning than what is necessary to regulate growth for even development.

Later-flowering Shrubs.—Turning to shrubs which flower from young wood, the summer and autumn flowering *Spiræas* may be taken as examples. These, if allowed to go unpruned year after year, deteriorate; therefore they are cut well back, and such of the older wood as is becoming weak is bodily removed. The younger branches may be reduced to a height of from 9 inches to 15 inches, taking care to leave the shoots fairly far apart. Species such as *S. japonica*, *salicifolia*, *Douglasii*, *Menziesii*, *betulifolia* and *Margaritæ* belong to this group. The strong

growing kinds, *Aitchisonii* and *lindleyana*, may also be cut back in spring; but it is not advisable to be too severe with the pruning-knife in their case, for they sometimes have a habit of going wrong after two or three years of severe pruning. *Hydrangeas*, such as *paniculata* and its variety *grandiflora*, may be pruned in February, taking care to cut last year's shoots back to within a couple of eyes or so of the base. *H. arborescens* may be treated in the same way; but not *H. Hortensia*, for to prune the latter in spring would be to cut flowering wood away. The two Brooms, *Genista tinctoria* and *Cytisus nigricans*, require cutting back in February, for they flower from young wood. *Colutea arborescens* is in some gardens treated to an annual prune over in February, with satisfactory results. *Ceanothus azureus*, *C. americanus* and the numerous garden varieties which bloom in autumn need to have their branches shortened in February. As a rule, they may have

tended to bring this about. The Large-sided Cabbage, "the best in the world" in 1717, would be no match now for Carter's Mammoth Beefheart or Dobbie's Improved Winningstadt. Nor would the white, the yellow-purple and blue Pansies of 1724 be fit to put beside those figured in Cuthbertson's "Pansies, Violas and Violets." And the interest of a "regular Wilderness" or "a promiscuous open Grove" (Switzer's "Ichnographia Rustica," 1718) cannot compare with that of a well-grown pmetum.

It is wonderful how much more enjoyment can be got out of our gardens when we have learnt something of the past history of their inmates and something about the men whom we call great gardeners of the past. How much abiding pleasure we lose from not knowing at least a little of some of the chief strata of the rock whence they have been hewn, only those who have the knowledge can say. I once called on the late Bishop Westcott



RAMBLER ROSES ON OLD KITCHEN GARDEN WALL, WITH FLOWER BORDER IN FOREGROUND.

last year's wood cut back about halfway. The early-flowering *Ceanothuses*, on the other hand, such as *C. rigidus*, *thyrriflorus*, *papillosus*, *veitchianus*, &c., must not be pruned until after the flowers have faded. W. D.

(To be continued.)

A GREAT GARDENER OF THE EIGHTEENTH CENTURY.

INTEREST in gardening is one of the outstanding features of British life in these opening years of the twentieth century. We are familiar to-day with vegetable wonders that were impossible 200 years ago. Improved means of transit, wider knowledge of plant-life, more scientific cultivation and the slow, coral-like accumulation of isolated facts have in their different degrees

of Durham when he was a Canon of Westminster. Our conversation turned upon books. I can never forget him saying in that strange, detached, rapturous way of his, which those who knew him will instantly recall, "It is something to have seen even the outside."

So of the great past of gardening. It is something to know even the names of those whose labour and influence have made it what it is.

One such name is that of Philip Miller—the Hortulanorum Princeps of his time in Europe—of whose justly-celebrated Dictionary no less a man than Linnæus said, "Non erit Lexicon Hortulanorum sed Botanicorum," who, looking at the circumstances of the age and the characteristics of his work, might without exaggeration be styled "the wet-nurse" of modern English gardening.

Born in 1661 at a time of transition; capable enough to be chosen by his compeers secretary to a society of gardeners and nurserymen, and editor of their projected work, a Catalogue of Trees, Shrubs and Flowers; well read and industrious, as a perusal of "The Gardeners' and Florists' Dictionary" of 1724 assures us; quick to take advantage of favourable circumstances with the unerring instinct of genius on the issue in folio in 1731 of what is popularly known as the first edition of his "Gardeners' Dictionary"; strong enough to take advice and far-seeing enough to adopt it, he, in his seventh edition, published in 1759, changed his classification from Ray and Tournefort to that of Linnæus; mindful of the pockets of the many, he issued in 1732, at the price of 4s., "The Gardener's Kalendar" (8vo), of which there were fourteen editions up to 1765; hoping thereby to provide work for more farm-hands in the dead season of the year—from harvest to spring—he urged the cultivation of Madder and wrote a treatise on the method of its cultivation, 1758; wishing to increase the usefulness of his great work, he was enabled by his fame and foreign correspondence to execute his superb "Figures of Plants" (1755—1760, republished 1798); unselfish, he accumulated no wealth, and when his powers failed in 1769 he resigned his office of Gardener to the Apothecaries' Company; Miller died on December 18, 1771, and was buried in Chelsea Churchyard, where the Horticultural Society erected an obelisk over his grave in 1810.

One purpose of this article is to suggest rather than to exhaust, and I am conscious that my description of him as unselfish is open to criticism, as is also my belief that he began life as a nurseryman and was the son of a market-gardener at Deptford or Greenwich. These are some of the points of uncertainty and interest which are suitable for the arm-chair by the fire.

Another, which is suggested by the frontispiece to the 1731 edition of his dictionary, is the sort of garden that Miller would be familiar with. Even if I were capable of such a thing, the due proportion of parts forbids me to make more than passing reference to the style that was *de rigueur* then. As may be seen from its reproduction on this page, it is a stiff, formal affair. The magnificence of Le Notre and the mathematical formality of William and Mary seem to be blended in its construction. So we have the long, straight canal with its fountains and waterfalls in the centre, and on the right a quadrate planted grove and an orangery, and on the left a

"cabinets" or "halls" and a kitchen, and possibly a flower garden; while in the distance outside the garden proper there is an orchard and a vineyard with an artificially-raised "mount" between them, probably planted with Yews, so that the owner might be able to obtain a bird's-eye

view of all the diversities of his "hortulan" endeavours. I almost wonder at the selection of this frontispiece, for the influence of Miller was not so much in the formation of gardens as in the introduction of new plants and giving precise and good hints for

their cultivation from his own experience. "There are very few Plants (out of the great number herein mentioned) which I have not cultivated, and the instructions given for their Propagation, &c., &c., are such as have succeeded best with me" (Preface, "Gardeners' Dictionary," 1731).

As the name of Miller is inseparably bound up with his dictionary, I will conclude with a chronological table comprising the chief of its different editions and noting the salient points of each. His other works, which have not been referred to in this article, are of minor importance; but a full list can be found in "Johnson's History of English Gardening."

Chronological Table.—1724: "The Gardeners' and Florists' Dictionary, or, A Complete System of Horticulture," 2 vols., 8vo, a book recommended by the Society of Gardeners, of which Miller was secretary. A sort of "scissors and paste" work. Switzer, Bradley, Mortimer, Evelyn, Liger, Laurence, Loudon, Wise, Fairchild and "Quintinev" are freely laid under contribution.

1731. "The Gardeners' Dictionary," folio, price £1 10s. A greatly improved and enlarged edition with a frontispiece of a garden. This is popularly spoken of as the first edition.

1739. Abridged in two volumes (8vo).

1740. Issue of the third volume of abridgment.

1746. Translated into Dutch.

1750-51. Translated into German.

1752. Sixth edition of the folio dictionary, "the first complete edition." A new allegorical frontispiece—Industry pouring into Britannia's lap what Nature has denied.

1755-60. 300 Figures of Plants on copper plates, folio, issued at £6 6s. plain, or £12 12s. coloured. These plates were published in monthly numbers. There was a re-issue in 1798.

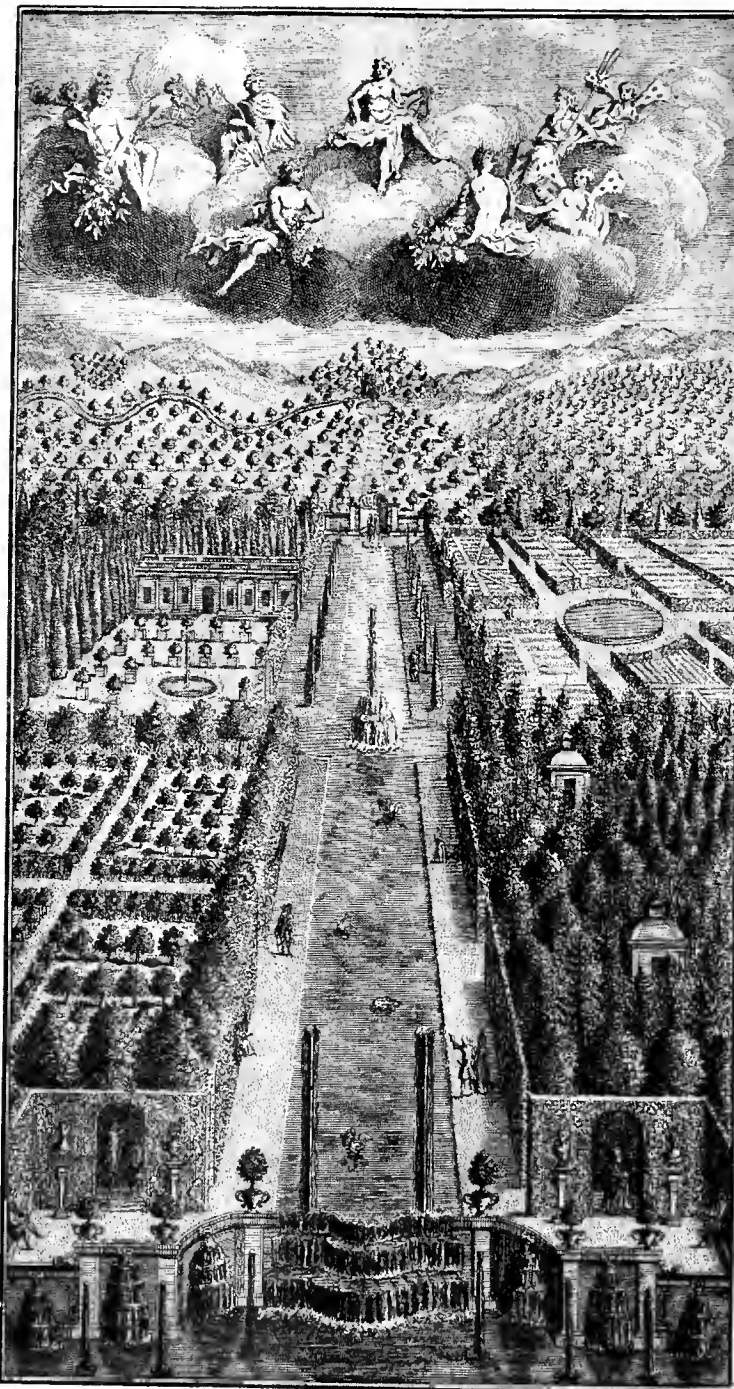
1759. Seventh edition. Published in numbers. Linnæan system first adopted.

1768. Eighth and last edition published in Miller's lifetime, "the number of plants cultivated in England in 1768 being more than double those which were known in 1731."

1785. Translated into French. Portrait of Miller engraved by Maillet.

1803-7. An enlarged, corrected and newly-arranged edition by Thomas Martyn, Professor of Botany at Cambridge. This includes a history of Miller's work, the life of Miller and the list of authors he (Martyn) used. "It is a standard practical work, never to be superseded" ("Johnson's History of English Gardening," 1829).

JOSEPH JACOB.



FRONTISPIECE TO MILLER'S "GARDENERS' DICTIONARY," 1731, SHOWING THE STYLE OF GARDENING OF THAT PERIOD.

view of all the diversities of his "hortulan" endeavours.

I almost wonder at the selection of this frontispiece, for the influence of Miller was not so much in the formation of gardens as in the introduction of new plants and giving precise and good hints for

GARDENING FOR BEGINNERS.

THE STAR-FLOWERED PRIMULA.

MY little greenhouse is devoted entirely to Primulas. The Chinese Primulas (*P. sinensis*) succeed admirably in company with *P. obconica*, *P. malacoides* (a comparatively new and easily-grown species with small pink flowers) and *P. kewensis*, a lovely lemon yellow hybrid which at one time would not produce seed, but has since changed its ways and seeds with great freedom. If, however, I could grow one Primula only, I should unquestionably select the Star-flowered, or *P. stellata*. It is an ideal flower for the amateur's greenhouse, yielding lovely colour-tones and varied hues from autumn till late spring—a time when flowers are so much appreciated.

The cultivation is not difficult, for *P. stellata* is not so fastidious as some of its near allies; at the same time, a certain amount of care is essential. The great enemy is damp in the winter-time, and over-watering must be rigorously guarded against. Damp will also seriously affect the seedlings in the spring, and too much care cannot be given at this critical stage. I usually sow a few seeds in March for autumn flowering, and follow on from April to June for successional bloom. Shallow pans are certainly best for sowing. They must be clean, dry and well drained, and a light, fine soil, consisting of sifted leaf-mould, silver sand and loam, is the best medium for sowing. After sowing, the pans should be placed in a warm frame, each pan covered with a pane of glass, and as the seed germinates better in the dark, the glass should be covered with brown paper. Very little water will be necessary until germination has taken place, when both the pane of glass and the brown paper will need to be removed altogether. This is the critical time in the life of the plants, and anything in the nature of drip from the roof or an overdose of water may end with disastrous results.

When large enough to handle, the young plants should be potted off singly, or pricked out over an inch apart in larger pans or boxes. Cooler treatment should be given from the time of germination onwards, so that a few days after potting up the plants may be placed in a cold frame, keeping them as near the light as possible and giving air on all favourable occasions. Later on the plants will be ready to transfer to their flowering pots; the 5-inch pot is usually quite large enough. At the time of potting it is most important that the crown should not be buried under the soil, as this will induce damping off quicker than anything. Shade is necessary during the summer months, and a light, airy house is of vital importance. It

is not generally known how hardy this class of Primula is, for so long as the plants are protected from frost there is no fear of injury; the cooler the treatment the brighter and better are the flowers. SPARTAN.

PROPAGATION OF CAMPANULAS.

Most Campanulas can be easily increased by division at the close of the flowering season; but

As soon as the young shoots are about an inch long, cut them off as near the base as possible, remove the lower leaves, and insert the cuttings in pots or pans of pure silver or river sand. If the stock plants have been in a heated greenhouse, the cuttings should be stood in a close case in the same structure; but if they have been in a cold frame, the cuttings may also stand in a cold frame, but it must be kept close. Three or four crops of

cuttings may be taken this way before the old plants become exhausted. The cuttings will be rooted in four or five weeks, when they should be potted singly in 2½-inch pots, using a compost of half loam and half leaf-mould and sand.

After potting, plunge the young plants in sand or ashes in a cold frame, and keep close until the roots show themselves round the sides of the pots. At this stage air may be freely admitted. In a very short time the lights may be removed altogether and the young plants will be ready for their flowering quarters.

The following species and their varieties may be propagated in the manner described: *C. carpatica*, *C. Fergusonii*, *C. gargarica*, *C. G. F. Wilson*, *C. Hendersonii*, *C. linifolia*, *C. portenschlagiana*, *C. pulla*, *C. pulloides*, *C. pusilla*, *C. rotundifolia*, *C. Stansfieldii* and *C. walsteiniana*. Campanulas raised this way will make excellent plants and flower well the first season.

Stevenage.

C. DAVIES.



THE STAR-FLOWERED CHINESE PRIMULA, A GOOD GREENHOUSE PLANT FOR THE BEGINNER.

when it is necessary to raise a large number from a few plants, recourse must be had to cuttings. During January or early February plants of the varieties that are required for propagation should be lifted and placed in pots just large enough to allow of a little fresh soil being worked round the roots. If they can be stood in a greenhouse having a very little artificial heat, young shoots suitable for cuttings will very soon appear; if this is not available, a cold frame will answer the purpose, but, of course, growth will be slower in this case. A sharp look-out must be kept for slugs, which are particularly fond of the young, tender growths of Campanulas. An occasional dusting of fine slaked lime and soot will hold them in check.

is that of having the stones so arranged that they look almost like a wall, so evenly are they disposed. There should be no formality, and there must be sufficient pocket space to contain the necessary loam for the plants to grow in. A load of pieces of rock, as tipped from a cart on to a heap of soil, often looks more artistic than the same pieces would if placed in set order by hand. The workman must have plenty of soil as a background both for the stones and the plants. He should fix some of the stones quite flat; others must be upright. Shelves should be formed and care taken that all rain-water will run from the stones to the soil, not from stone to stone, and so conveyed away from the roots of the plants. B.

HOW TO MAKE A SMALL ROCK GARDEN.

VERY often quite inexperienced persons are requested to build rockeries, and although they are willing to do the work, they have no means of gaining any information in the immediate neighbourhood which will be of use to them. The general mistake made is the one of placing (packing would more truly describe it) the stones or pieces of rock too closely together. Then another mistake

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Parsnips.—The main crop of this vegetable may be sown now at any time when the ground admits of a good tilth being made. Select a piece of ground that has been well worked but not heavily manured, break the surface down with a fork, and finish off with a wooden rake. Sow in drills about an inch and a-half deep and 18 inches apart.

Peas.—On warm borders and congenial soils a sowing of Peas may now be made, though it is preferable to raise these in boxes, and the same applies to Broad Beans. With either always admit abundance of air whenever the weather permits.

Mint and Tarragon.—Roots of these may be lifted and boxed and placed in a growing house for supplying young growths for flavouring.

Globe Artichokes.—These will require protection in the event of hard weather.

Jerusalem Artichokes.—The ground for this crop should be well prepared and plenty of manurial agents added; then the same piece of land will grow them for several successive years. Plant the seed-tubers 6 inches deep, and 2 feet between the tubers and 1 yard between the rows. The white variety is preferable to the older purple-skinned sort.

Shallots may be planted as soon as the ground permits, and may also be grown on the same site for many years. Rake the ground down to a good tilth and press the bulbs into the soil to two-thirds of their depth, 9 inches apart and 1 foot between the rows.

Parsley in cold frames should be carefully picked over and decayed foliage entirely removed. The covering should be taken off, whenever possible, and air given.

Winter Onions.—Transplant these on to a well-prepared piece of ground that has been well worked. A sprinkling of mortar rubble and wood-ashes raked in on the surface will be beneficial. Plant the strongest of the seedlings from the rows that were sown out of doors at the end of August. Make the young plants quite firm at 15 inches apart and the same distance between the rows, and mulch with spent Mushroom-bed manure. Excellent Onions may be obtained in this manner, especially for exhibiting.

Radishes.—Make small sowings where a vacant place can be found between crops in frames or hot-beds.

General Work.—If the ground is not in too wet a state, push on the work of digging and trenching, and take out the trenches, throwing the soil out roughly for Celery, Runner Beans, Peas, &c., so that it can become pulverised before returning to the trench over a layer of manure. This method is an excellent one to adopt whenever possible.

Pruning Apples.—The two chief items to observe in pruning are a well-shaped tree, whatever form it may take, and branches well furnished with fruiting spurs. Bush trees in the garden often have to be restricted. Avoid overcrowding, and cut out superfluous branches neatly with a pruning-saw.

Peaches and Nectarines on Walls require the growths regulated, preserving as much young wood as possible and thinning out older wood, especially where devoid of fruit-buds. Train

the growths as straight as possible and make secure with nails and shreds.

Bush Fruits should not be allowed to become too dense. Black Currants merely require a judicious thinning. White and Red Currants and Gooseberries require the leading shoots tipped back, and others spurred back to two or three buds from the base, cutting out any weak ones entirely. The pruning of these is best deferred for a few weeks, otherwise the birds may take the remaining buds. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Herbaceous Borders.—Work left over from the autumn should be completed without delay, such, for instance, as dividing and replanting Asters, Rudbeckias, Helianthus, Senecio tanguticus, Solidagos and Aconitums. Spring planting retards flowering, which is in many cases a thing to be desired. Make the surface of the borders smooth and neat, and surface dress clumps of spring-flowering bulbs with a sifted compost.

Montbretias.—Replant these, working a nice lot of rotted manure deep down and planting the corms 8 inches or 9 inches deep. Those not lifted have been growing all through the winter, and will now be benefited by a dressing of manure on the surface, first, of course, clearing away the old foliage which has served as protection.

Carnations.—Those wintered in pots should be planted out where they are to flower, early planting resulting in a much better display of flowers than if it were delayed two months longer. Autumn-planted beds should be cleaned and dressed with pigeon-manure and a heavy application of soot. All diseased and withered foliage must be picked off at the same time. A reserve supply grown on in pots is advantageous.

Sowing Flower Seeds.—Seeds should be sown at once of good strains of Pentstemons to provide a grand autumnal display. Germinate in heat. Also sow *Verbena venosa*, first steeping the seeds for forty-eight hours in water to ensure rapid germination, and *Salpiglossis*, *Lobelia*, *Celsias*, *Pyrethrum*, *Delphinium*, *Lupinus polyphyllus* in variety, *Scabiosa caucasica*, *Petunias* and fibrous-rooted *Begonias*.

Onions.—I grow all Onions from seeds sown at or about this date in cutting-boxes and raised in a temperature of 55° to 65°. The boxes are stood one above another until the seedlings begin to appear, thus taking up little space, and are then transferred to a cooler structure. For ordinary bulbs the one transplantation from the boxes to the kitchen garden quarter serves.

Parsnips.—Seeds of these may now be sown, dropping a few at every 9 inches apart, which saves after-thinning. A big sowing of *Guerande* or another stump-rooted variety should also be sown.

Sowing Vegetable Seeds.—Sow more Spinach, Lettuces and Radishes in the open, and Brussels Sprouts, early Cauliflowers, Autumn Giant Cauliflowers and Lettuces in cold frames. These frequently come in very useful.

Celery.—For the main crop seeds of Standard Bearer may be sown in boxes, and a fortnight hence another batch of the same, choosing, according to the progress of each, those likely to give the best results. The trenches should be got

ready on cold mornings when sowing and pruning cannot be proceeded with, the ridges being utilised for dwarf Peas, Lettuces, French Beans and such-like.

Cabbages.—Spring Cabbages will now appreciate dressings of sulphate of ammonia, pigeon-manure or other stimulating material, subsequent to the application of any of these well stirring the ground and drawing some of the earth up the stems of the plants. These dressings and after-operations considerably hasten the turning in of the hearts, as well as causing them to increase in bulk later.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE TOWN GARDEN.

Large-flowered Daisies.—In some gardens these are difficult plants to grow; in others they succeed. They are suitable plants for small beds in town gardens. Cultivators should now closely examine the stock. Earthworms lift the soil among them, and when particles lodge in the axils of the leaves or the crowns of the plants for a considerable time, the whole plant often dies. Any soil found there must be removed. Put on now a surface mulch of Cocoanut fibre or finely-sifted sweet leaf-soil to a depth of 1 inch.

The Laurustinus.—This is a really good plant for a town garden, and will succeed in nearly every town except those where there are many tall chimneys, much smoke and chemical fumes. The foliage is beautiful, the habit of the plant bushy, and the flowers are freely produced. Where these are grown as separate shrubs or to form hedges, a surface mulch of rotted manure should be put on now, and if the leaves are very much discoloured with soot and dust, they should be syringed or washed by means of a hose-pipe during rainy weather, as growth is freer when the foliage is clean.

Flowering Cherries.—These plants will also do well in ordinary soil in town gardens. They flower in spring and have a charming appearance. Standard trees may be planted now. The varieties *Prunus japonica alba* (double), *rosea plena*, *Juliana pendula* (lovely on a lawn) and *Sieboldii alba* and *rosea* (both double flowered) are beautiful.

The Flowering Currant.—This shrub is a valuable one for growing in a town garden. There are many borders on the north side of low walls or wooden fences which are difficult to fill satisfactorily. The Flowering Currant would succeed either as a hedge or as dot plants several feet apart. The varieties *Ribes sanguineum*, *s. atropurpureum* and *s. rubrum* (double flowered) should be planted.

Espalier Fruit Trees.—A few fruit trees are always much appreciated in town gardens; but in some parts they are not a success, and generally there is not much room for them. Espalier trees are those growing near the paths and trained to wires. Such do not take up much space. The following may be grown: Pears—Williams' Bon Chrétien, Marie Louise, Pitmaston Duchess, Doyenné du Comice and Durondeau; Apples—Warner's King, Lane's Prince Albert, Allington Pippin, James Grieve and King of the Pippins. Put in healthy young trees at once if the soil is dry enough, make the loam firm around the roots and put on a mulch of littery manure.

Daffodils.—The growth of these and several other kinds of bulbs is very forward, but cultivators

need not be afraid of frosts injuring them. If any growths are partially buried under leaves, clear the latter away forthwith, as they only serve to draw up the "grass" and render it weaker.

The Garden Frame.—From this date the management of the frame will become an easier matter. Ventilate *Calceolarias* freely and pinch off the tops of forward plants. Sow a few seeds of Pansies and Petunias.

The Greenhouse.—*Aspidistras* are so valuable for greenhouse, porch and dwelling-room decoration that it is advisable to take every care of the plants now. Repot any that require more rooting space, using fibrous loam, leaf-soil and sand, with a few lumps of charcoal in each pot. Water carefully afterwards. By potting now, the plants will be well rooted and strong by mid-summer.

TOWN GARDENER.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Early Potatoes.—It is, of course, early to think about planting Potatoes in the majority of gardens, but there will be some readers who are favoured with a border of deep, light soil beneath a fence or wall facing the south, and to these one may safely advise the planting of a few rows about the end of the month. The sets ought to be carrying splendid sprouts about one inch in length, and they should be covered with 6 inches of friable mould. The lines may be 18 inches asunder and the plants 12 inches apart in them, as it is important that a small-topped variety be chosen for this purpose. If wood-ashes are available, put some in the drills, and have immediately at hand some straw or other material for protection if wanted.

Long-pod Beans.—Before the month has run its course, a sowing of a favourite variety of Long-pod Beans ought to be made. It is imperative to success that the soil shall be in perfect mechanical condition, and that it shall contain plenty of food. The seeds must be set 3 inches asunder in shallow, flat-bottomed trenches, say, 2 inches in depth in a strong soil, and 3 inches in a light soil, and the covering soil must never be deeper than 1 inch at this early period of the year. If the plants are to be in single lines, the trench may be 5 inches wide; but for double rows they ought to be 12 inches, so as to allow a good air space between. When the plants appear, thin out as required to give each plant 6 inches for fruiting.

Shallots.—In the old days there was a rule to the effect that all Shallots must be planted on the shortest day of the year, and that the crop must be harvested on the longest day; but this has fallen into disuse, and happily so, since it is impossible to follow such hard-and-fast lines in a variable climate like that of our small island. If the cloves can be got in this month, so much the better; but if the soil is not in suitable condition for such work, leave them until next month, and there will be no real loss. For purposes of exhibition, the big red variety is the favourite; but for pickling, the true English Shallot is infinitely superior. The soil must be in excellent condition, and each clove should be pressed into the surface until the nose is just about level; a distance of 12 inches in all directions is suitable.

Parsnips.—These were invariably sown in the autumn in many gardens a few years ago, but the

system is not nearly so commonly adopted nowadays; most of us are content if we can get a few lines in by the end of February and make a successive sowing in March. The rows should be at least fifteen inches asunder, and the drills for the seeds ought to be about one inch in depth. Instead of sowing the seeds continuously, drop clusters of three at intervals of 9 inches, as this is conducive to finer plants and reduces the labour of thinning to the minimum. There is probably no variety superior to Tender and True.

Planting Horseradish.—This plant is commonly a noxious weed in gardens, because the bed is utterly neglected and the roots spread out in all directions. Those who desire to have a constant supply should be prepared to give the crop the same intelligent attention that they devote to other plants, and they will then have splendid sticks with no fear of trouble. The best system is to cut shallow trenches 3 inches or 4 inches deep and 14 inches wide, fill these firmly with rotten manure, and build up from them a ridge sloping to 6 inches or 8 inches wide at the top. Along each side of this, at a distance of 10 inches apart, push in whips about the size of the little finger, cut squarely at the top and slantingly at the bottom; the upper end should be just on a level with the soil surface when the task is done. Formed now, ridges will yield handsome sticks in one season, and there will never be any trouble in getting them. The length of the ridge will vary with the demands of the establishment.

H. J.

NOTES ON RECENT NUMBERS.

The Garland Rose (page 1, January 6).—Mention of the heps of this reminds one of the bright effect in late summer of those of *Rosa lucida*, a good old single Rose that would be worth growing for this alone. Besides its pretty rose pink flowers, the neat, polished leaves are always attractive, and in late autumn turn a bright yellow, and sometimes nearly scarlet, colour before they fall. There seem to be two distinct forms of this useful bushy Rose—the type, which is smaller and closer-growing and not more than 4 feet high, and a garden variety, which is more free in growth and larger in every way. The double *R. lucida*, with its pretty old name *Rose d'Amour*, should be in every garden.

Plants for a Blue Garden (page 7, January 6).—The plants available are fairly well exhausted in Lady Galway's copious notes, though among the *Irises* no special mention is made of the one of the truest blue colouring, viz., *I. pumila cærulea*. *Iris Cengiali* is also very near a blue, and a close match to it, and the bluest I am acquainted with among the *Flag* kinds, is a fine one named *Chameleon*. There is a wonderful new plant from Uganda, which, if it proves available for summer use as a tender annual, will be a great gain among the comparatively rare true blues. It has been successfully grown in the greenhouse by Mrs. Alfred Russel Wallace, from whom I lately received a flower. It is *Pychnostachys Dawei*, a many-branched plant about three feet high, with terminal flowers of the intense pure blue of a March sky. The individual flowers, which are in a crowded, bluntly conical head about one and three-quarter inches wide and high, are of the labiate form and of a velvety texture.

Bed of Tuberous Begonias (page 12, January 6). The illustration prompts me to remind those who make use of this fine plant of the good effect

gained by grouping and bordering them with the foliage of the Large *Megasea* or *Saxifraga* (*M. cordifolia major*). The leafage of the *Begonias* is their weak point; but if they are grown in a kind of irregular framing of the *Megasea*, they gain greatly by the association, the weak succulence of their own leaves being well replaced by the bold form and leathery texture of those of the Great *Saxifrage*.

Clematis Flammula (page 23, January 11).—Many are the ways of using this autumn-blooming species, but one of them, namely, that of treating it as a border plant, is not often thought of. But, planted at the back of the border, it is capital for training over other things that are out of flower, such as *Delphiniums*, and it is charming among the earlier *Michaelmas Daisies*. In our September borders we plant it next to one of the *Starworts* (*Aster umbellatus* syn. *amygdaloides*), which it much resembles, and run it up through a small grey-leaved Willow, which is kept trimmed to a convenient height. It makes a pleasant illusion of a *Michaelmas Daisy* breaking out of bounds and rioting as a climbing plant.

Romneya Coulteri (page 25, January 11).—The instructions for propagating by root cuttings are very useful. If others agree with my own observations, it would appear to be well to keep up a supply of young plants. With me, in a warm position in dry, sandy soil, it flowers well at two and three years of age. After that the plant grows large, but the blooms become very few. G. JEKYLL.

LEGAL POINT.

Fence, Waste (*R. Cookham*).—A tenant for life of certain property removes a dividing fence for the purpose of erecting some workshops, which have since been removed, and the present owner of the property sends an enquiry as to the responsibility of the executors of the deceased life tenant. The question is one which may be entangled with an innumerable number of side points, but will be probably sufficiently disposed of by considering one or two tests. If in the original instrument the estate was given to the life tenant "without impeachment of waste," there is probably no remedy, as the act would not be sufficiently serious to amount to what is known as "equitable" waste. If, however, nothing is said about "waste" in the will or settlement, the act amounts to voluntary waste, and the only things to be considered are the effect of the Statutes of Limitation and some general principles. In case of an ordinary estate for life followed by a legal remainder in fee simple, the remainder man should apparently sue the life tenant for damages, assuming that he does not claim an injunction, within six years from the commission of the act of waste. There are certain complicated cases, namely, when there was no person entitled to an immediate fee simple in remainder, in which the statutory period does not run till the death of the life tenant, but these can at present be left out of consideration. Assuming that the present querist owned the immediate inheritance in fee simple, and neglected to take proceedings during the existence of the life interest, the right of action survives against the executors, but only provided the injury was committed within six calendar months before such person's death and action is brought within six months after the executors have taken upon themselves the administration of the estate and effects of the

deceased. I have dealt with the question under the simplest form it can assume, and the preceding remarks may be sufficient to enable the querist to decide whether he has any cause of action. If the limitations of the estate or circumstances are different to those here assumed, he should be advised in the ordinary manner.—BARRISTER.

THE EDITOR'S TABLE.

White Chrysanthemums from Leicestershire. Two exquisite varieties of white Chrysanthemums, Heston White and Mme. R. Oberthur, have been sent to us by Mr. C. Ware, The Gardens, Quorn Lodge, Loughborough. The flowers arrived in a perfectly fresh condition, and, considering the time of year (the first week in February), they were remarkably good. Mr. Ware sends the following note: "I am sending a few Chrysanthemums for your table. I find Heston White and Mme. R. Oberthur the two best for late use. I have just finished cutting Mme. R. Oberthur and am now using Heston White."

Fruiting Sprays of Garrya elliptica.—*G. elliptica* is an ornamental hardy shrub known generally on account of its pendulous catkins, often 6 inches to 9 inches long and borne at this time of the year. The catkins of *Garrya* are male and female, borne on different plants, and while the elegant male catkins are known by their appearance, the female plant is less attractive and seldom cultivated. Sprays of the female *Garrya* bearing clusters of small black berries have been sent to us by Mr. Thomas Smith, Coombe House Gardens, Westbury-on-Trym, together with the accompanying note: "I am sending you a bunches of fruit of *Garrya elliptica*. I dare say you know the female form well enough, but I think it is not very often met with."

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SEED-SOWING IN THE OPEN (W. L. J.).—We take it that you are referring to hardy annuals chiefly; and if so, the early days of March, provided the state of the soil and climatic conditions permit, will be found suitable for a large number. Not a little, of course, depends upon the object in view; but, assuming that ordinary garden decoration is intended, the time stated will do quite well. The condition of the soil, however, is important, and moderately dry soil is the best. The list of plants that may be sown where they are intended to flower is rather a long one, and may be said to embrace the majority of hardy annuals. Some of the more worthy would, naturally, include Poppies, Mignonette, Linums, Marigolds, Tom Thumb Nasturtiums, Nemophila insignis, the whole array of annual Chrysanthemums and such as coronarium in variety, carinatum in variety, and those greatly-improved varieties of Chrysanthemum segetum known as Morning Star, Evening Star and Southern Star more particularly, Nigella, Godetias, Lupines,

Larkspurs, Candytufts of several shades, Sweet Peas, Sweet Sultan, Statice sinuata, Indian Pink, Eschscholtzias, Calliopsis and many more might be so treated and attended to in the important matter of early thinning calculated to give the best results. To obtain a full measure of success, this latter work must be done with good nickardly hand.

SWEET PEAS (Dolphin).—The following varieties will suit your purpose admirably. You give no indication of the number you require to grow, so fifteen are named. Elsie Herbert, Florence Wright, Eric Harvey, Sunproof Crimson, Mrs. C. W. Breadmore, Countess Spencer, John Ingram, Helen Lewis, Clara Curtis, Mrs. Hugh Dickson, Walter P. Wright, Mrs. A. Ireland, Thomas Stevenson, Princess Victoria and Tennant Spencer.

LILIES OF THE VALLEY (R. C. L.).—You should obtain the Lilies of the Valley and plant them without delay. Any nurseryman or bulb-dealer will supply you, and your better way will be to purchase single crowns of the Berlin variety and plant them 6 inches apart over any area you like. The crowns, if of the best quality, should flower in spring, though of necessity only moderately well because of the check produced by enforced idleness and dryness. The plant delights in the richest soil, much moisture and a partially cool, sequestered spot. November would have been a better time for the work.

HARDY ANNUAL OR HARDY PERENNIAL (H. E.).—Among hardy perennials we know of nothing better than the crimson-red of the Mossy Saxifraga Guildford Seedling, which, with its carpet of deep green leaves, would constitute a good contrast to the blue-grey foliage of the Pinks at any time, and in a dual sense in regard to the flowers. The plant is hardy, of easy culture and free in growth. We know of no plant likely to fulfil the requirements of your second query. Some good plants with orange-coloured flowers are *Dimorphotheca aurantiaca*, a *Marguerite*-like flower, and the rich orange-flowered *Nemesia*, but in your district it is highly probable that these would require some care to ensure success. You do not say to which *Omphalodes* you refer, but, having mentally recalled them all, our reply to your enquiry is as above.

BOG GARDEN (Miss P.).—It will not do to turn your small tank into a bog garden unless there is some outlet at the bottom for superfluous moisture, for, if you have no such outlet, the soil will soon become sour and unsuitable for the roots of plants, in addition to being very disagreeable on account of the smell. After arranging for an outlet, place a good layer of bricks, covered with cinders or coarse sand. On this place a good layer of turf, grass-side downwards. Then fill up with a compost of coarse loam and sand in one part, and coarse peat and sand in another, to suit the different kinds of plants which you are likely to grow. Arrangements must be made to provide sufficient water to keep the soil thoroughly wet. With a natural bog there is not the same tendency for the soil to become unsuitable for the plants as there is in a small, badly-drained tank; but even in such cases moisture-loving trees do not make progress unless a certain amount of drainage is done before planting. All the river mud ought to be taken out of your tank. Fresh soil will answer your purpose very much better.

TREES AND SHRUBS.

GOLDEN PRIVET SHEDDING ITS LEAVES (H. E. J.).—We should imagine that the recent wet weather may have caused the leaves of your Golden Privet to fall, that is, if your ground is heavy. Water-logged soil lies very cold, and very cold, wet ground or atmospheric cold are both likely to cause the same thing. After a frosty period it is always expected that both the ordinary Oval-leaved Privet and the Golden-leaved variety will lose a quantity of leaves, the number being determined by the severity of the weather. Without knowing the exact conditions under which your plants are growing, we are unable to offer any other solution of the trouble.

BLACK WALNUT (W. M.).—We do not know of any firm of nurserymen in the British Isles who would be able to supply two year old plants of Black Walnut in the way you require them. If you cannot obtain the young trees, it is probable that you could procure Nuts to raise your own trees from. The Black Walnut requires a deep, loamy soil, and thrives best below a latitude of 50° feet. It is not well suited for a very exposed position, although quite hardy. The timber of trees grown in the British Isles has been reported on very favourably by cabinet-makers. The tree requires a fair amount of sun during summer and autumn to ripen the wood.

LABURNUM FLOWERING IN WINTER (W. S.).—We are at a loss to account for the behaviour of your Laburnum, and can describe it as nothing else than a freak of Nature. Had the tree grown at the ordinary time and simply borne flowers in autumn, the explanation would have been easy, for a form of *Laburnum alpinum*, which is one of the parents of *L. Parkii*, blossoms regularly in autumn and bears the varietal name of autumnalis. It is also usual for other Laburnums to bear a few blooms in autumn, particularly when a moist, warm autumn succeeds a hot, dry summer. We have not, however, previously heard of a plant never coming into leaf until autumn, for four successive years, and flowering in January.

SLOE HEDGE (B. C.).—It is doubtful whether you will be able to form a really good Sloe hedge and obtain a good crop of fruit from the Sloes likewise, for the best hedges are only obtained by repeatedly cutting the branches back, and the best fruiting plants are those which are allowed to grow freely. If you allow your hedge to grow wild for the sake of fruit, the bottom is almost sure to become thin; therefore, if a protective hedge is the first consideration, we should advise you

not to trouble about the fruit. We have not heard that any special experiments have been made with the ash of burnt peat with a view to ascertaining its manurial value, but we should imagine that it might be used in the same way as wood-ash and produce very similar results.

THE GREENHOUSE.

ODONTOGLOSSUM LEAVES DROOPING (G. B. P.).—We are unable to give any reason why the leaves of your *Odontoglossum* are drooping unless we see a specimen, preferably a whole plant, or at least a pseudo-bulb with leaves attached. Your plants have undoubtedly received a severe check in some way, such as overwatering, which would cause the roots to decay. This is usually followed by the shrivelling of both the pseudo-bulbs and foliage. Can you possibly mean the leaves are *drooping* instead of *drooping*, as stated in your letter?

PLANT FOR NAME AND TREATMENT (C. W.).—The name of the specimen sent is *Chlorophytum elatum*, a very useful greenhouse plant. It is a native of South Africa, and for its successful culture needs to be kept safe from frost. It is not at all particular in its requirements, and may be potted in a compost suitable for the general run of greenhouse plants, that is to say, a mixture of loam, leaf-mould or peat and sand. You do not say whether you have a greenhouse; if so, it will succeed perfectly therein; but if not, it may be grown in a window. Indeed, it has a very pretty effect, as then the long, pendulous spikes, terminated by tufts of growing plants like that sent, at once arrest attention by reason of their uncommon appearance. Botanically, it belongs to the Order Liliaceae.

FERNS FOR WARDIAN CASE (A. B.).—Ferns of an evergreen character suitable for growing in a Wardian case under the conditions named are *Adiantum ethiopicum*, *A. Capillus-veneris* (British Maidenhair), *A. fulvum*, *Asplenium Colensoi*, *Blechnum occidentale*, *Davallia canariensis*, *D. Mariessii*, *D. Tyermanii*, *Doodia aspera*, *Doryopteris palmata*, *Lastrea aristata variegata*, *L. lepida*, *Nephrolepis cordifolia compacta*, *Onychium japonicum*, *Pellaea ternifolia*, *Polystichum triangulum*, *Pteris cretica albolineata*, *P. leptophylla*, *P. scaberula*, *P. serullata gracilis* and *P. grevilleana*. That pretty Creeping Moss, *Selaginella kraussiana*, often called *Selaginella denticulata* and *S. hortensis*, will clothe the surface of the ground with bright greenery. We have named more Ferns than you will require, in order to give you a choice, as tastes vary so much.

DATURA AND COBÆA (M. K.).—It is impossible to decide from the specimen sent why your young *Datura* has failed to grow; neither are we able to suggest the specific name from so young a plant. There are several kinds of bushy *Datura* which would thrive out of doors with you during the greater part of the year, and perhaps the whole year round, as is the case in some parts of Cornwall. The best kinds are *D. sanguinea* (red), *D. suaveolens* (white) and *D. chlorantha* (yellow). You would be well advised to obtain young plants from a nurseryman, rather than try to grow your own from seeds. Once you have obtained stock plants, you may increase the number of your plants by means of cuttings. Leave your plant of *Cobæa scandens* alone for another month or so; then cut the side branches back to within a bud or two of the base. You might try plants of *Cratogeomys Pyracantha* against the wall you mention. They are not self-clinging, therefore you will have to secure the branches firmly to the wall. Give them good soil when you plant them.

INJURY TO GERANIUM LEAVES (H. H.).—There is no doubt that the injury to the Geranium leaves sent is caused by too damp an atmosphere. Geraniums, or, more properly, Zonal Pelargoniums, need a light, buoyant atmosphere, while the condition of your vinery is certainly the reverse. The temperature named is quite correct for them, but there is decidedly too much moisture. Cannot you remedy this by giving air whenever possible? At the same time, the weather of late has been so excessively wet that the vinery would in all probability be damper now than in an ordinary season. If the blue mould strikes deep into the cut portions of the Vines, just touch these cuts over with painter's knotting. The specimens sent are: 1, *Begonia peltonioides*; 2, *Cyrtanthus angustifolius*; 3, *Agave americana* (American Aloe); 4, Zonal Pelargonium Paul Cramped; 5, *Gasteria species*; 6, *Echinocactus species*; 7, *Mossbryanthum species*; 8, *Begonia semperlorens* Snowflake; 9, *Crassula (Kalanchoe) coccinea*; 10, Zonal Pelargonium Dr. A. Vialottes. The specimens numbered 7, 8 and 9 cannot be named more definitely without flowers.

MALMAISON CARNATION AND GARDENIA (R. W.).—Judging by the leaves of the Malmaison Carnation, the plant is infested both by red spider and rust. For the former, sponge the leaves, particularly on the undersides, with a lather of soft soap and warm water, and for rust, or Carnation leaf spot, as it is sometimes called, cut off the worst of the infected leaves and burn them at once, afterwards spraying the remaining leaves with Velthea Emulsion. For Malmaison Carnations a light, airy house is essential, and during the winter a night temperature of 45° is quite warm enough. You do not say what state your plants are now in, otherwise we might advise you further. The Gardenia needs to be potted in a mixture of two-thirds loam to one-third leaf-mould and a sprinkling of silver sand. As the pots get well furnished with roots, a mixture of soot-water and liquid manure will be beneficial. Gardenias will thrive during the winter in a structure where a minimum temperature of 50° is maintained, rising, of course, during the day. They may also be successfully grown under warmer conditions. As with the Carnations, if we knew the state of your plants we could give further advice.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Apple Prunings.—While Apples are being pruned it is well to remember how useful the best pieces are as small flower-sticks; they are specially good for Carnations. It is as well, in order to keep them fairly straight, to tie them in bundles.

Rose Richmond in February.—We have never been so impressed with the beauty and value of this Rose as a good forcing variety as on the occasion of the last meeting of the Royal Horticultural Society, when Messrs. Mount of Canterbury exhibited a hundred or so of its superbly-coloured, long-stemmed flowers. The freshness, fulness, size generally, colour and fragrance, with foliage and stems of such ideal character, rendered the group one of the chief attractions of the meeting. We believe the date in question, *i.e.*, February 6, to be the earliest on which this well-known Rose-growing firm has staged this Rose—certainly in the perfection in which it was seen.

A Winter-flowering Greenhouse Climber.—The Hibbertias form a class of Australian shrubs, a couple of which at least are of a twining nature. The first is the vigorous-growing *H. volubilis*, whose showy yellow flowers have an evil smell; and the second, *H. dentata*, which is a really valuable climber for the greenhouse, whose merits are enhanced by the fact that it blooms throughout the entire winter months. It is of fairly quick growth, and mounts upward by twining its thong-like shoots around any support. The ovate leaves are leathery in texture, and of a dark bronzy green when mature; but when young they, as well as the bark of the young shoots, are red. This latter feature varies in intensity according to the amount of exposure to which the plant is subjected. The golden yellow flowers are about a couple of inches across, and somewhat suggestive of those of an *Hypericum*. From a foliage point of view alone it is a very pretty climber, and, of course, additionally so when in bloom. A third species, *H. Readii*, forms a dense, twiggy bush, with yellow flowers about the size of a shilling.

Winter Broccoli.—Rarely indeed has the visitor to the fortnightly meetings of the Royal Horticultural Society had an opportunity of inspecting so fine a group of winter Broccoli as that staged by Messrs. Sutton and Sons, Reading, on the 6th inst. There were three notable varieties arranged on a spacious table. Basket after basket of the compactly-formed heads or curds demonstrated to what high excellence the culture of these greatly-esteemed winter vegetables has attained, yet, despite this, improvement by selection and otherwise is constantly going on. The three sorts staged were Snow White, Winter Mammoth and Sutton's Superb Early White, than which

latter none could possibly be more beautiful or inviting.

What to Plant Beneath Trees.—This is an oft-recurring question in large and small gardens. For clothing the bare soil beneath deciduous trees, and at the same time a good flowering plant, it would be difficult to surpass the *St. John's Wort* (*Hypericum calycinum*). The foliage is ever-green, and the comparatively large yellow flowers are produced freely in summer. The readiest means of propagation is by division of the roots. Three years ago we planted a large bare piece of ground beneath a Lime tree with this *Hypericum*, placing the tufts 15 inches to 18 inches apart. At the present time the plants form a perfect green carpet beneath the tree. To prevent the old growths in course of time spoiling the effect, every second year it is advisable to cut down the growths early in April to within about three inches of the ground.

Senecio Petasites.—This is the correct name of the yellow-flowered greenhouse plant exhibited by the Countess of Ilchester, Abbotsbury, Dorchester, under the name of *Senecio grandifolius*. Both have yellow flowers, which are produced in midwinter, and both are natives of Mexico. Growing side by side, however, the plants are very distinct. The flowers of *S. grandifolius* are richer in colour and borne in a flattened corymb, whereas those of *S. Petasites* are disposed in a large thyrsoid panicle. *S. grandifolius* has rich deep green leaves about eighteen inches in length and half as wide; in *S. Petasites* they are light green and roughly round in outline. The stems of *S. grandifolius* are dark purple, those of *S. Petasites* being light green. Both species are readily propagated by cuttings in spring.

Plumbago rosea superba.—A correct estimate of the value of this charming Indian shrub can be made when it is seen in flower, as in the greenhouse at Kew, with numerous other plants which bloom during the two duldest months of the year, for throughout the last few weeks it has presented a most attractive feature and readily commands a large share of attention from visitors. Its clear, rose-coloured flowers are larger than those of the type, and they are carried in finer inflorescences. Whether grown in 5-inch or 6-inch pots, with several branches rising to a height of 3 feet or more, or as single stems, terminated with a large head of flowers, in 3-inch pots, they are equally pleasing, and are very effective when arranged with green foliage plants, Roman Hyacinths or Paper-white Narcissus. The larger plants may be obtained from cuttings rooted during spring, and single-stemmed plants from cuttings rooted in summer. Whoever is responsible for keeping a warm greenhouse or conservatory gay during winter would do well to make a note of this plant.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Creeping Jenny as a Basket Plant.—One occasionally, but less frequently than before, comes across the old Creeping Jenny or Moneywort (*Lysimachia Nummularia*) as a basket plant in cottage windows. It looks very pleasing in summer with its long sprays of rounded green leaves freely set with their yellow flowers. The golden-leaved variety, *L. N. aurea*, is also very pleasing, as the leaves are a good yellow and the flowers harmonise well with the coloration of the foliage. This makes a good basket plant also, and one finds many inferior things cultivated for the purpose.—A. M. D.

Crocus vtilinus.—This *Crocus* is a little species which comes very early, and whose bright yellow flowers are appreciated as coming in before most others of its colour. I have not found it such a long-lived plant as some of the other *Crocus* species, and have lost it more than once. It is one, I think, which is all the better for a little shelter from the stress of winter in our climate. This can be afforded by placing a bell-glass or handlight over the clump. These are preferable to a simple sheet of glass elevated above the flowers by wire or other supports, as the latter, while throwing off rain and snow, will not check the rude winds of winter, which spoil the flowers of a little *Crocus* such as this, whose brightness we wish to prolong as much as possible.—S. ARNOTT.

Cotoneaster horizontalis.—This Chinese species of *Cotoneaster* was introduced about thirty years ago. It still holds its own as one of the most striking and distinct of all the *Cotoneasters*, and one which passes through several distinct phases of beauty during the year. Commencing with the spring, the tender, unfolding leaves and the pretty pinkish flowers combine to form a pleasing feature; then the berries, like drops of sealing-wax, assert themselves, and the autumnal tints (for it is deciduous) are very bright. Lastly, in the winter the curious, horizontally-spreading style of growth is very noticeable, particularly when the regular fish-bone-like arrangement of the minor twigs is outlined by hoar-frost. *Cotoneaster horizontalis* is a good wall plant.—H. P.

A Little-known Red Salvia.—I should like to recommend to your readers *Salvia Pittieri*. This seems a little-known plant which deserves to be much more generally cultivated. It is not hardy, but is less tender than *S. splendens* and much more easily grown. When planted out in May it soon makes large, bushy plants 3 feet high and as much across. The flowers are a beautiful blood red (not quite so scarlet as *S. splendens*), each flower as large as, or larger than, *S. patens*, and of the same shape and velvet-like consistency, forming spikes of bloom from six inches to ten inches long. By the end of September the whole plant is a blaze of red, making a most effective and welcome bit of colour thus late in the year. It is a plant which likes a good deal of moisture to its roots, but should be fully exposed to the sun, when it will retain its beauty until cut down by the frost. It is very easily propagated by cuttings.—(Miss) SELINA RANDOLPH, *Chartham Rectory, Canterbury*. [*Salvia Pittieri* is a rather rare plant in this country. It is a native of Costa Rica. It was discovered by M. Pittier in 1888, but for some reason is still but little known.—Ed.]

Sweet Pea Thomas Stevenson.—In reference to our remarks about this variety in connection with the coloured plate presented with our issue for February 3, Messrs. Dobbie and Co. inform us that it was their stock which received the award of merit at the National Sweet Pea Society's trials last year. It was also reserved for the silver medal, and has to be grown for that purpose at the trials this year.

Cassia corymbosa.—This beautiful flowering shrub does well in the mild climate of the Isle of Wight. My friend Mrs. Evans writes me from Ventnor: "Every year it is covered with flowers, and has seeded now for the first time. It is 8 feet high, and is a lovely sight for months. It begins to flower in July, and on January 9 there were still a few flowers left." Those who have the advantage of a suitable climate should not forget this fine thing. With its polished pinnate foliage and orange-coloured blooms it has that distinguished and well-dressed character that makes it a welcome ornament on the walls of a dwelling-house—G. J.

Snake's - Beard Plants for Rooms.—The Snake's-beards, or *Ophiopogon*, are excellent plants for the conservatory, but they are also highly useful for the dwelling, and their ability to stand a low temperature in winter makes them of great service for rooms which are frequently unheated for days at a time in winter. A good plant of *O. Jaburan variegatus* has stood with me for a number of years in a room which seldom has a fire in winter, and its prettily-variegated foliage stands the vicissitudes of every season well. It blooms in summer, giving spikes of blue flowers fairly freely. A soil of an open, sandy character suits this and the other Snake's-beards best.—M. D.

A Stream Garden.—The pretty picture of *Iris laevigata* on the bank of a narrow water-course (page 48 of January 27 issue) reminds one of a still more desirable way of treating such a place. It is always best, when plants and water are in company, for the flowers to be as nearly as possible on the same level as the water. When it is down in a ditch-like hollow, the water is not easily seen, a good deal of the pictorial effect being necessarily lost when the eye has to take a separate view of the water and the plant. Such a place suggests the making of a really beautiful water garden by excavating the soil on both sides of the stream for a width of several feet down to within 3 inches or 4 inches of the water-level. If the landward excavation is left on an easy slope, and the spare earth is thrown up just beyond, quite a wide piece of bank is gained. The path, preferably of rough, flat stones, may vary its course by here and there crossing the stream. If the top of the bank is planted with suitable bushes of wild character, such as Thorns, Hollies and some of the better Brambles, the water garden will soon gain complete seclusion. The shadier banks will be a happy place for hardy Ferns, never handsomer than when seen across a little stream with a wide setting of Water Forget-me-not; indeed, if the more important of the hardy Ferns are largely used, the place will gain that inestimable quality of quietude and restraint that is so often painfully lacking in planted ground. A beautiful water garden may be made with native plants alone, for, in addition to the most desirable Ferns, which will be Lady Fern, Male Fern, *Osmunda*, Hart's-tongue and Dilated Shield Fern—there are many others, but these would be enough—there are the Water Plantain, one of the most beautiful of foliage plants; the

Flowering Rush (*Butomus*), with a curiously refined kind of beauty that makes one think of some rare stove exotic gone astray; the yellow Flag, the grand Marsh Marigold, Snowflakes, Lent Lilies, Fritillaries, double Cuckoo-flower, Meadow Orchis, Meadow-sweet, the large blue Meadow Crane's-bill and the Great Water Dock. This list by no means exhausts the native ornamental plants of stream, bog and cool bank, but names enough for the planting of a good hundred yards or more of stream garden to great advantage.—G. JEKYLL.

A Beautiful Stove Plant.—*Astrapæa Wallichii* is a most elegant stove evergreen tree; it has often been described as being one of the finest plants introduced into this country, and when seen in flower it captivates the attention of all gardeners. Its native home is Madagascar, and it was introduced to this country about 1820. The colour of the flowers on the true plant should be scarlet. In 1910 a seedling plant was sent to us from the Royal Horticultural Society's Gardens; it was carefully grown on till it reached a height of 12 feet, and about the middle of December it began to flower. The colour of the blossoms of this plant is rather a pale pink, and they are fragrant. It is very easy to grow, providing one has sufficient heat.—W. D. P., *Wareham*.

Erlangea tomentosa.—On several occasions within the last two or three years attention has been directed to this showy composite in the various horticultural journals, and quite recently several good groups were noted in the greenhouse at Kew. *Erlangea tomentosa* is a native of Tropical Africa, where it appears to be widely distributed, especially about the East and in the neighbourhood of the Zambesi River. Under natural conditions it grows 5 feet or so high, but as a cultivated plant it may be kept dwarfed by stopping the shoots. In this way fine examples 2½ feet high and as much through are obtained. The oblong leaves are about five inches in length, and they have rather coarsely-toothed margins. The lilac flowers are borne in flattened panicles 6 inches or more across, and they remain in good condition for several weeks. Cuttings rooted in spring grow into good-sized plants during summer if given rich loamy soil and an intermediate temperature to begin with and a cool greenhouse afterwards. At the flowering-time a minimum temperature of 45° to 50° is necessary.—W.

The Lapageria in the Open.—Lovers of climbing shrubs in favoured situations might do well to try *Lapageria rosea* in the open. This is not to be commended in the case of any but those with specially mild climates, as otherwise the results would be very disappointing. Even in cold districts, however, one has occasionally seen a long shoot which had found its way out of the greenhouse or conservatory trained against a warm wall and giving occasional good results, although the roots being in a warmer place made the growths appear too early. Yet in the favoured parts of the country it will do on a south wall; and last year the writer came across good plants of both the rosy crimson *L. rosea* and the white *L. rosea alba* growing and flowering well on the front of a Wigtownshire house. This was close to Loch Ryan, but it says a good deal for the mildness of the climate and the comparative hardness of *L. rosea*. There it usually flowers well, and it is certain that there are places along even the North-West of England and the West of Scotland where it might be cultivated in the open successfully and to the gain of the owner.—S. A.

A Note on Parsley.—This most useful kitchen commodity requires a little extra thought and labour just now if it is to be kept in usable condition. The continued wet, followed by cold winds, occasional sleet and touches of frost, retards the growth of the young Fern-like leaves, besides rendering the older leaves unfit through dirt and a slimy form of decay, in addition to which many leaves are turning slightly yellow through maturity or ripeness. To keep up the supply, one of two practices may be adopted. Place hand-lights, cloches, or bottomless boxes with pieces of glass across the top over the plants where growing, or take up a batch of roots and transfer them to a frame or greenhouse. The former suffices in mild winters and where the requirement is not excessive, but the latter is best in severe winters and where it is essential to grow Parsley quickly and plentifully.—C. TURNER.

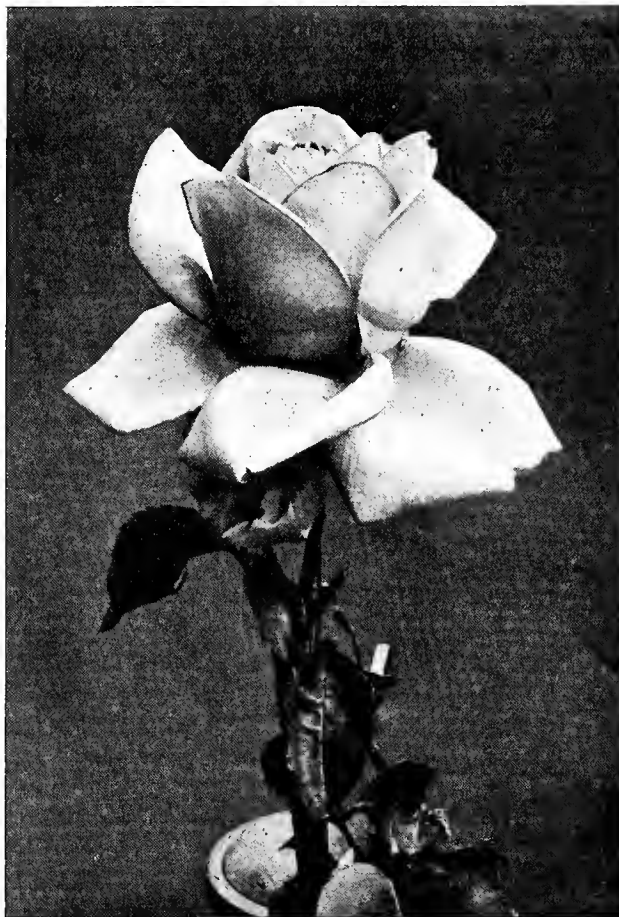
Olearia Haastii for Sandy Soils.—

There are not many kinds of flowering shrubs that will succeed year after year on a dry bank composed mainly of sandy soil. The shrub here named has, however, proved very satisfactory in such positions for many years to my knowledge. There are few shrubs that possess more fibrous roots. I have seen specimens lifted with balls of soil and roots combined as large as the head of the plant. The leaves are small, very closely placed on the branches, and of a dull blue-green colour, with creamy brown on the under sides. The flowers, which are white and numerous, open in July in the South and early in August in the more Northern Counties, and last in good condition for about six weeks.—AVON.

The Poison Ivy.—Your Canadian correspondent, Mrs. Baines of Toronto, whose note appears on page 2 of your issue for January 6, is quite right in warning the public against the poisonous nature of the *Rhus Toxicodendron* wilding, which is so often confused with other vines of a harmless character. I can bear testimony to this fact from a series of bitter experiences in my youthful days. For years I was a victim of this cruel mistaken identity, simply because my parents on the home farm knew no better. They taught me to carefully shun the *Ampelopsis quinquefolia* (Virginia Creeper) that grew along the fences, which they said was Poison Ivy (*Rhus Toxicodendron*), so all this time I was coming in contact with the latter, and, of course, suffered greatly from the effects. Often my face and hands were covered with the watery blisters, and at times my eyes were so swollen that they were nearly shut.—H. HENDRICKS, *Kingston, New York*.

Sweet Peas Too Much Alike.—As one of the small fry in the large number of "down-trodden" quasi-amateur Sweet Pea growers, and one who likes to grow a dozen or two of the best but distinct varieties each year for decoration only, may I be permitted to say that I was most pleased to read the article under the above heading by Professor Biffen in *THE GARDEN* for January 20. Such lists as he refers to are most useful to the

grower, who, like myself, delights to grow the best but is cramped for space. In *THE GARDEN* dated February 3 I notice Miss Hilda Hemus is a little perturbed about Mr. Biffen's article; but as he did not mention the names of any variety or of any raiser, I fail to see why any individual interested in the sale of seed should rush into print to protest against such a necessary article. Mr. Biffen hopes that Mr. Horace Wright, who was a constant visitor at last season's shows, will give your readers an authoritative summing-up of the best half-dozen among the novelties offered this season. Mr. Horace Wright and Mr. Biffen, I am sure, are both well qualified to compile such a list quite impartially. I hope Mr. Biffen's request for the best half-dozen novelties will



HYBRID TEA ROSE MELANIE SOUPERT.

meet with response from Mr. Horace Wright.—H. P. BOYCE, *Bristol*.

FORTHCOMING EVENTS.

February 19.—National Chrysanthemum Society. Executive Committee Meeting at Carr's Restaurant, Strand, 6 p.m.

February 20.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster. Lecture at 3 p.m. by Mr. W. Cuthbertson on "New Sweet Peas." North of England Horticultural Society's Meeting at Leeds.

February 22.—Manchester Orchid Society and North of England Horticultural Society's Joint Show of Orchids only at Manchester

February 24.—Chester Paxton Society's Meeting.

THE ROSE GARDEN.

ROSE MELANIE SOUPERT.

(HYBRID TEA.)

THIS is deservedly one of the most popular Roses of its class. It is a favourite with the exhibitor by virtue of its faultless flower, and, owing to its rather vigorous habit, it is the most useful bedding Rose of its colour. In the rapidly-approaching season of pruning it is well to remember that this is one of the varieties that will repay for hard pruning. The colour of the flowers is not easy to define; it has been described as pale sunset yellow, suffused carmine; but even this does not do justice to the indescribable beauty of a youthful flower perfect in form.

THE VALUE OF BASIC SLAG AND BONE-FLOUR.

I AM not sure that the rosarian has yet realised the value of these two excellent fertilisers as aids in the production of quality of bloom. There is a tendency to run after the more expensive compounds, thinking, perhaps because of the high price, they must of necessity be more valuable. But I venture to assert that, given a good trial of basic slag in the lower soil and bone-flour in the upper soil, many would be astonished at the result.

Now these manures are very slow in their action, and should be applied in winter, or at least the basic slag should, and I would advise anyone who is looking for a good lasting fertiliser to apply this at the rate of 6oz. to 8oz. per square yard. Perhaps exception should be made in the case of chalky soils; but on all clayey soils and those containing humus, basic slag is excellent. If trenching is contemplated for any new beds of Roses, work in the slag with the lower spit of soil, adding farm-yard manure also; then, when the Roses are planted, a handful of bone-flour for each bush or tree should be applied just beneath the surface soil. Basic slag should be finely ground in order that it may be of most service. It is very necessary to purchase it from a reliable firm, as many spurious samples are on the market. Sweet Pea growers, also fruit growers, would find it of great value to them. P.

ROSE GRUSS AN AACHEN.

THIS pretty Rose is classed among the Dwarf Polyanthas, but surely it is nearer the Hybrid Teas. It is comparatively unknown, and I have only seen it in one English list; but it is a charming Rose, well worthy of cultivation. The flowers are large, fully $3\frac{1}{2}$ inches across, double and of rather flat shape. The colour is a lovely chamois yellow in the centre, with pale, almost whitish, outer petals having a suspicion of pink about them. The habit of the plant is bushy and dwarf, excellent for bedding and massing. It is a free and continuous bloomer, and altogether a very pleasing variety. P.

THE GREENHOUSE.

THE CULTIVATION OF THE PELARGONIUM.

A FEW weeks ago I put forward a plea for the more extensive use of these fine flowers in the decoration of greenhouse and conservatory, and promised, with the Editor's permission, to give a few practical details of their cultivation, which does not seem to be very well understood by the present race of gardeners. As the present time is an admirable one for making a start, either with cuttings or autumn-rooted cuttings, I now redeem my promise.

Propagation.—Personally, I prefer to propagate both Zonal and Regal sections in autumn, but they

stronger, say, three parts good loam, two parts leaf-mould, one part sand and a quarter part of wood-ashes. Pot firmly, but not too hard, and set again on the shelf near the glass. Water with extra care until the pots are well filled with roots. In due course a shift will be necessary, this time into 6-inch pots for the strong ones and the 5½-inch size for the weaker growers.

The Final Potting.—A good substantial compost is necessary, but over-rich soil is a mistake, as it causes soft gross wood and huge leaves, with few and badly-coloured flowers. My own practice is to use three parts of the best fibrous loam obtainable, one part leaf-mould, two-thirds of a part coarse sand, and a 5½-inch potful of bone-meal to each barrow-load of the other ingredients. Should the loam be poor, a small quantity of dry horse-manure is added and a good sprinkling

out of the offender. As soon as the flowering pots are well filled with roots, gentle feeding should be administered in a liquid form. Soot-water, ordinary liquid manure, well diluted, and Ichthemic Guano are all excellent, and may be used alternately. About twice a week is often enough to apply stimulants.

After Flowering.—When the plants are somewhat exhausted by months of continuous flowering, less water should be given for a week or two, and then the plants be cut back to within 3 inches or so of the soil. If kept on the dry side, fresh growth will soon be apparent, and by the middle of February or so they will be ready for a little fresh treatment. I have long discontinued the annual potting of these plants, which entails a great deal of unnecessary labour, without any corresponding advantages. My plan gives very little trouble, and I am certain that it gives much better results than the old method. With a pointed stick I loosen an inch or so of the surface soil, which I remove. I then add half an inch of rich fresh compost, such as already advised for the final potting, and then sprinkle a heaped teaspoonful of Thomson's Manure evenly round each plant. A little more soil is added and made quite firm, and the operation is over. Of course, it is necessary to see that the drainage of each pot is in good working order. The plants are carefully watered and set in a temperature of about 60° for a few weeks, and any necessary pinching attended to. By the third week of April fine blooms in abundance are showing, and the plants are then removed to an ordinary cool greenhouse, where they bloom profusely for six months.

Feeding the Plants.—They are, of course, regularly and systematically fed, principally with Ichthemic Guano—a heaped tablespoonful in a gallon of water. In the height of the season this is given about three times a week, but at first twice a week is sufficient. Old plants are good for at least three years and produce far more flowers than young plants, and if treated as advised, the trusses and pips are but little inferior, while the colours are superb.

The Regal Section.—All the foregoing applies principally to the Zonal section, but the remarks on potting, feeding and top-dressing will exactly suit the Regals also. When these latter cease flowering, water is gradually withheld and the plants are removed to a sunny position out of doors, where they are laid on their sides to allow of the wood ripening. Early in September they are cut hard back and set in a cold pit. All through the winter they are kept cool, just sufficient fire-heat being used to exclude frost. Water is also used very sparingly. In February the plants are top-dressed in the manner advised for the Zonals. Subsequent treatment is also much the same, and I find that I am seldom troubled with green fly. Of course, the greenhouse is occasionally vaporised with XL All, but that is all the precaution taken to keep the Pelargoniums clean. C. BLAIR.

Preston House Gardens, Lintthgow.



FLOWERING SPRAYS OF BUDDLEIA ASIATICA, A BEAUTIFUL WINTER-FLOWERING GREENHOUSE SHRUB. (See page 81.)

can be rooted at almost any time of the year. I put in a large batch of cuttings on October 30 last, and did not lose 3 per cent. of them. However, September, February or March are probably the most desirable seasons for this work. Insert three or four cuttings round the edge of a 4-inch pot, using an open compost of two parts loam, three parts leaf-mould and one part very sharp sand. A shelf in a greenhouse is about the best place to stand the pots of cuttings. On no account over-water the soil at any time, but more particularly before the cuttings are well rooted and during winter.

Potting-Off Young Plants.—From the middle of February to the middle of March is the best time for potting the young plants off singly. Use 3-inch pots for the weaker plants and the 4-inch size for the stronger ones. Make the compost a little

of Thomson's Plant Manure. The pots must be clean and carefully but not over-crocked. Make the soil as firm as possible with the fingers, but do not use a rammer. Set the plants in a cold frame in a sunny position, water carefully, and keep close for a few days to induce a rapid start.

After-Treatment.—Pick off all flower-buds as they appear until the plants attain a decent size. One of the mistakes I notice growers very frequently make with these plants is to allow them to grow tall and thin. They seem to be afraid to pinch them; but they may be pinched whenever necessary throughout the growing season. I very often begin the pinching in the cutting pots, and certainly always while the plants are in small pots. Then after the final potting, whenever a shoot grows away from the others and threatens to spoil the shape or balance of the plant, the point is pinched

BUDDLEIA ASIATICA.

AMONG the many species of *Buddleia* that require the protection of a greenhouse during the greater part of the year, there are few to equal *B. asiatica*, either for its graceful appearance, its flowering season, or its delicious fragrance. Although it was in cultivation so long ago as 1874, in some way it became lost for many years. It was, however, reintroduced in 1902 by Mr. E. H. Wilson, who was then collecting in China for Messrs. J. Veitch and Sons, and since then it has proved such a valuable acquisition for the greenhouse that it is not likely to drop out of cultivation again so easily. There are at least two or three forms of this species, of which the plant now cultivated appears to be the best, for it differs somewhat from the plant figured in the *Botanical Magazine*, t. 6323, in having larger flowers with longer and narrower leaves, while the petiole is shorter. Another form is mentioned having a buff-coloured tomentum on the under surface of the leaves. This *Buddleia*, besides being a valuable pot plant, is also an excellent subject for clothing a pillar, when, if possible, it should be planted at the base in a light, rich loamy soil. If given a sunny position it will make rapid growth, which will produce long racemes of white, fragrant flowers in abundance during January and February. After the flowering period is over, the shoots should be shortened back, occasionally syringing the plants with tepid water; this will induce the plants to break freely. During the growing season the plants will derive much benefit from frequent applications of manure-water. Cuttings inserted in sandy soil during March or April root readily, and when potted on into 6-inch or 7-inch pots will form useful plants from 3 feet to 5 feet high; these will commence to flower soon after Christmas. *B. asiatica* is a native of the East Indies and the warmer parts of China. It is also known under the name of *B. Neemda*. W. T.

CAMELLIA JAPONICA GRANDIFLORA.

THIS beautiful form of *Camellia japonica* when better known should prove a great gain for conservatory decoration, appealing to those especially who dislike the *Camellia* in its stiff double form. This plant differs from the old single white form of *C. japonica* in having a double row of petals. Moreover, it possesses beautiful undulated and crinkled petals; whereas in the old form the petals are smooth and flat, with entire edges. There is also a great difference in the size of the flowers; in *grandiflora* the flowers are from five inches to six inches across, and have been described as six inches to seven inches across, which is quite possible with strong plants. The plant from which the illustration on page 82 is taken is a young one in a 7-inch pot. It is certainly an exquisite flower with its pure white petals and great cluster of golden stamens. The flower has great substance and remains fresh for a week or more. The plants were imported from Japan, and even in the Japanese lists it is described as being scarce. There appears to be no previous record of it in this country. J. C.

TREES AND SHRUBS.

WHEN AND HOW TO PRUNE ORNAMENTAL SHRUBS.

(Continued from page 71.)

Clematises.—February is a good month to prune *Clematis Jackmanii*, *C. lanuginosa* and *C. Viticella*, together with their numerous varieties; but *C. florida* and its forms must be left until the flowers have fallen. The *Jackmanii* varieties require severe pruning, and the others moderately heavy pruning. *C. montana* must not be pruned until after it has flowered. March is a good time to prune coloured-stemmed Willows, *Cornus*, &c., which are grown for winter effect. As a rule, the harder they are pruned the better is the colour of the bark the following winter, for the shoots are more vigorous from hard-pruned plants. Where plants like *Paulownia imperialis* and *Ailantus glandulosa* are grown for the subtropical effect of their large leaves, the plants should be cut down almost to the ground in February. Many shrubs, such as most of the *Philadelphuses*, *Ribes*, *Diervillas* and *Cotoneasters*, require no regular pruning, but may do with thinning and shaping occasionally. An exception must, however, be made with the dwarf *Philadelphuses* as typified by *P. Lemoinei*, for they thrive better when the old wood is cut away as

the work, for new growth is then soon formed. In the case of straggling *Rhododendrons* which have to be cut back, it is sometimes advisable to sacrifice the flowers in order to be able to cut the branches back in April, so that the longest possible growing season may be secured. Bamboos pay for having the older growths cut out right to the base each year. April is a good time for the work. W. D.

THE FLOWER GARDEN.

STONE AND BRICK PAVEMENTS IN GARDENS.

BESIDES obvious uses for plain pavings of flags, bricks and strong tiles, places often occur about carefully-planned gardens where a piece of more ornamental pavement is desirable. It may be the floor of a summer-house or garden pavilion, or the space surrounding a sundial or some other important central point in a garden design, or where important paths cross, and, most often, a platform for a seat, raised by a shallow step above the path or grass-level. But wherever such an opportunity occurs, it gives scope for the very interesting use of brick and stone, or of varied stones in combination. In the writer's locality there are two kinds of stone,



A WALLED ROSE GARDEN WITH STONE PATHWAYS.

soon as the flowers have fallen. Lilacs which appear to be weakening may be improved by having sucker growths and weak inside wood removed in February, and again in June or July. Autumn-flowering Heaths should be cut over during winter.

Evergreen Shrubs.—When evergreens have to be pruned severely, April is the best time for

one a hard sandstone that can be chosen in the quarry, either in blocks suitable for building or in slabs, that may be set flat for paving or on edge for kerbing. Much of it can be dressed to a thickness of 2½ inches, when, used on edge, it works in well for the guiding lines of a design that is filled in with a "pitching" of the other stone. This occurs in small loose stones, on or just beneath

the surface of the ground. They contain a good deal of iron, are nearly black in colour, and a large proportion of them have one good end, which, to take an average size, would be 3 inches long and three-quarters of an inch wide, while the stone would be about three inches deep. The surface is of a fairly smooth, water-washed character. The sandstones, some ten inches deep, being firmly put in, the spaces between are nearly filled with sand, and it is an easy matter to set the ironstones, first carefully graded to size, when the whole is rammed to an even level.

Where stones can be collected from seashore shingle, there will be a wider scope for ornamental treatment, for on most shingly beaches stones nicely matching in size and of many colours may be collected. It is a delightful occupation for children, and capital eye-training both for estimation of size and perception of colour. Stones of white, pale and deep yellow, cool grey of one or two shades, and nearly black colourings may generally be found. Besides the many varieties of pattern with rectangular or circular bases or other symmetrical form, a pavement in which the compass points are shown is an interesting feature in any garden.

G. J.

SWEET PEA NOTES.

Varieties.—In a recent issue of THE GARDEN Professor Biffen, in a most kindly letter, suggests that I shall give extended consideration to varieties, but it really seems impossible to do so in the limited space at my disposal. In the present season the number of novelties offered for the first time is immense, and it would demand at least three issues of THE GARDEN fully and adequately to deal with them, and such an amount of room cannot possibly be given. The differences between some of the new ones and others that have been on the market for a season or two are infinitesimal; but the introducers, if no one else, can see them plainly enough, so someone is happy. I maintain my offer to make selections for readers who will write to the Editor, and will devote as much space as possible to varieties after the shows and trials are over for the season, when one will, obviously, be in a better position to speak authoritatively on the subject.

Outdoor Sowing.—Broadly speaking, it is too early to consider sowing seeds out of doors yet; but there can be no doubt that where the soil is naturally light and warm, seeds sown now will produce superior plants to those sown a month hence. The advantage lies more, of course, in the root development than in the top growth, and to ensure the full benefit from this, the sowing must be in a deep, friable medium, or the roots will not extend as they ought to do. Let the seeds be set 3 inches apart on a flat, level, firm base, and do not cover with more than an inch of soil. It will be wise in most instances to thickly coat all seeds with red lead, or the mice may take more than a fair share of them.

Sowing Indoors.—Between the present date and the end of the month is an excellent time for sowing in the greenhouse or gently-heated frame, and it is well within the bounds of possibility that amateurs, whose conveniences for bringing along the plants are usually exceedingly limited, will have better success with these than with those from seeds sown in January, for the simple reason that they will not have so long to keep them sturdy and strong under glass. For autumn sowing I give the preference to 5-inch pots or boxes of good depth, and for spring I should favour the latter or 3-inch pots. Depth is not, however, as important now as in the autumn, because the plants will not have to spend nearly as long a period in the pots or boxes. As a compost take three parts of good loam to one part of refuse manure, and one-



THE NEW CAMELLIA JAPONICA GRANDIFLORA (MUCH REDUCED).
(See page 81.)

eighth or one-tenth of a part of sharp sand to ensure the essential porosity. For white or cream coloured seeds, and also for those that are wrinkled and spotted, surface the compost with sand and press the seeds into it, making no attempt whatever to cover them in. The ordinary seeds may be covered with soil to a depth of about three-quarters of an inch. In 3-inch pots place one seed, while if boxes are requisitioned allow from 4 inches to 5 inches in all directions. The pleasant temperature of an ordinary greenhouse or heated frame, with regular moistness of the soil, will favour germination, and later the plants should be grown as hardily as possible. The chipping of all seeds is unnecessary; if the seedlings do not appear in reasonable time, rake out the seeds that are dormant and chip them.

HORACE J. WRIGHT

WHY DO SNOWDROPS FAIL IN SOME SOILS?

We so frequently hear that Snowdrops will grow anywhere that it seems almost incredible that they will not do so, and we are apt to associate the failures with some defect in the manner of planting. Yet the Snowdrop has a curious way of refusing to become established, and of dying out gradually, however carefully it is planted and however congenial appear the conditions. The writer knows of several places where it was planted in quantity in apparently the best positions and under the same conditions in which it thrives in the land almost adjoining, yet the bulbs failed to become established, and either died off in a wholesale way or gradually dwindled away.

A recent instance of this failure came before me lately, and with a view to endeavouring to ascertain the cause, I turned up a number of articles on the subject of the flower and its ways. I fear the result has been unprofitable, as there are evidently few facts to go upon, save the one that the Snowdrop will not grow everywhere. We find, however, the statement made by one of the best authorities on the cultivation of such plants, the late Mr. F. W. Burbidge, that "double Snowdrops often thrive where the singles die off, either by reason of the fungoid disease peculiar to them, or from some other unknown cause, and possibly lack of moisture." As Mr. Burbidge says, in addition, the reverse is often the case, and the doubles die out while the singles thrive. It is a little difficult to adopt the theory that the fungoid disease may be the cause, as there appears to be no reason why it should not attack the double-flowered plants as well as the singles. Nor should lack of moisture have anything to do with it, and one has come to the conclusion that the cause is an unknown one. Both forms usually do well in the same soils, and they also occasionally fail. Still, the notice of those who cannot succeed with the single Snowdrops may well be drawn to the point, as one had better have the double Galanthus than none at all, and, *vice versa*, better have the

single than the charming Snowdrop unrepresented entirely. There can be little doubt that Snowdrops are better in grass than anywhere else, and that when they are planted elsewhere they should be carpeted with some low-growing plant, preferably one which is evergreen. Under such conditions the plants seem healthier and are also cleaner, there being less risk of the flowers being disfigured by mud during heavy rains than when on bare soil. They look happier also when among roots than elsewhere, and the beauty and vigour of Snowdrops under trees have frequently been remarked upon.

The late Mr. James Allen, who was *facile princeps* in the culture of the Snowdrop, preferred a soil of about one-half of yellow loam and one-half of unsifted river grit with some leaf-soil added. A sloping bank, shaded by trees, was what he recommended



New Red Currant—
The Southwell.

as an ideal position. Then he found that *Galanthus Elwesii* did not do well in close, retentive soil, and that *G. latifolius* and *G. caucasicus* preferred gritty loam. He did not use manure.

One question which may call for consideration is the effect of lime on the plants. Is it possible to make a soil suitable for the Snowdrop by the addition of lime, or is this material inimical to the welfare of the plants? So far as my own experience goes, the presence or absence of lime in the soil does not matter. Still, an excess of lime may be decidedly injurious, although this is not likely to be the case in all the instances of failure which

obtain some idea of the factors to be studied. I expect we shall each have "to dree his own weird," yet the exchange of thought will be profitable at least.

Dumfries.

S. ARNOTT.

COLOURED PLATE.

PLATE 1445.

A NEW RED CURRANT.

COMPARED with flowers, the introductions of new fruits are few, and even then the varieties are not

coloured plate being quite typical of the variety in this respect. The long bunches of fruit are of excellent colour, and the large berries particularly firm, so that fruits will travel well without injury. The spray from which the coloured plate was prepared had two postal journeys, entailing about one hundred and fifty miles, and then arrived at its destination quite sound. The flavour is brisk and well defined, and the habit of the bush sturdy and upright. This variety can easily be picked out from others by its extra dark foliage. It was raised by the well-known firm of Messrs. H. Merryweather and Sons of Southwell,



A QUIET WOODLAND SPOT WHERE SNOWDROPS THRIVE.

have come under my observation. Another point worth considering is whether the bulbs have not suffered by being dried and kept too long out of the soil before replanting is performed. This is not natural for the Snowdrop, and may possibly account for failures the first season, although it is only possible, and not very probable, that this may have had something to do with the losses in subsequent years. The whole question is so full of difficulties that it would be foolish to enter upon it with any feeling of dogmatism. It is one on which there is room for a difference of opinion, and it would be a boon indeed to many who love the Snowdrop, but cannot grow it, were they to

always so distinct or meritorious as we would wish. This impeachment cannot, however, be brought against the new Red Currant The Southwell, a coloured plate of which is presented with this issue. Although previous to its introduction there were several varieties of sterling merit in existence, there is ample room for this new-comer, which has several excellent points in its favour. One of its characteristics is that it flowers considerably later in the spring than other Red Currants; consequently the blossoms are less likely to be injured by frosts, a by no means unimportant point. It is also a very free-fruited Currant, the spray which is represented in the

Notts, to whom we are indebted for the introduction of Bramley's Seedling Apple and, more recently, the Merryweather Damson. Fortunately a good many hybridisers are now working on our edible fruits, and doubtless ere many years have passed the varieties of Apples, Pears, Plums, Cherries, Gooseberries, Currants and other kinds will be very largely added to. Although a great deal of improvement has already been made, there is still an ample field available for those who care to take up the work. The spray of Currants from which our coloured plate was prepared was kindly supplied by Messrs. Merryweather.

FLOWERS AND FRUITS OF THE EARLY EIGHTEENTH CENTURY.

THE first quarter of the eighteenth century was a period of transition, and this in two ways. The "formal" style, which was probably at the height of its fame in the days of William and Mary, was beginning to give way to a freer and less stiff style, and a great influx of new plants was on the eve of taking place. How many these were can be easily seen by comparing Miller's 1731 edition of his Dictionary with the edition edited by Professor Martyn of Cambridge in 1792.

What, then, were the chief flowers and fruits that were at this period to be found in English gardens? In the larger ones nothing was more generally popular than the orangery. No garden of any pretensions was complete without one. The variety which was considered the best adapted for our climate was the "Sevil-Orange," "as well for the beauty of its leaves as the goodness of its fruit." It seems that one of the great centres for rearing young trees was Genoa, and it is interesting to note that in all treatises and articles dealing with Orange trees, "how to manage them after they come from foreign parts" occupies a considerable space.

Another characteristic of some of the larger gardens was the Vine. Either in vineyards or against walls Vines were very frequently wet with. Miller, in his "Gardeners' Dictionary" of 1724, enumerates no fewer than forty-eight varieties, which shows its popularity at this epoch; but I presume, from a reference in Johnson's "History of English Gardening," that the former of these methods was fast passing out of fashion. He says that the celebrated Thomas Fairchild was one of the latest English cultivators of a vineyard, of which he had one at Hoxton as late as 1722. The white Muscadine and the white and red Frontinac were the varieties usually recommended.

When we come to other fruits, we find that the most prized were Pears. I judge this by its position in "The Retired Gardener" of Carpenter (1717). Summer Pears, August Pears, Pears for every month up to March are enumerated. St. Germain, Messire Jean and Russelets were three of the best. Peaches, Nectarines and Plums were thought much of and largely grown. Some, such as Queen Claudia (our Green Gage) and Newington (Nectarine) are still with us. Apples loomed large. The most famous was the celebrated Golden Pippin. There were Cherries and Apricots, although these latter were limited in their varieties. One of the most interesting facts is connected with Strawberries. There were no hybrids known, and the modern plethora of varieties was limited to three—Scarlet, Wood and Hautboy, and these are, of course, species.

I now come to the flowers, and to get a correct idea of those which were most commonly met with

I do not think I can do better than go to John Laurence's "New System of Agriculture, being a Complete Body of Husbandry and Gardening" (1726). Laurence was a clergyman, who first had a living in Northamptonshire and then moved to Bishop's Wearmouth in the county of Durham.

he may be looked upon as a safe guide. Book V. is devoted to the flower garden, and here he gives "a complete Catalogue of Flowers great and small, perennal or annual usually known or propagated in England either in the naked Ground or Hotbed." His divisions are (1) Perennal flowers of the tallest size; (2) Perennal flowers of the middle size, whether from bulbous roots or offsets; (3) Reptiles, or the lowest vivacious flowers; (4) Annual flowers from seed; (5) Annuals to be sown in hotbeds.

In No. 1 we have Hollyhocks, Sun-flowers, several kinds of Lilies and Martagons, Canterbury Bells, Foxgloves, *Campanula pyramidalis* ("When this plant is set in a pot supported with sticks beautifully painted it may become the Closet or the Chamber of the nicest Lady" — Laurence) and Tuberoses. These last must have been a very popular plant and very largely grown, as "the flowers blow successively one after another, by which means it continues a long time in bloom." In No. 2 we get Columbines, Sweet Williams, Iris, Fritillarie, Narcissus or Daffodil, Crown Imperials, Ranunculus, Carnations and Pinks, Peonies, Tulips, Stock-Gilliflowers, Hyacinths and Anemonies. In Laurence's directions the greatest spaces are given to the Carnations, Tulips and Narcissus (*Polyanthus*), but Hyacinths and Anemonies must have run them very close as everybody's flowers.

The "reptiles" or lowest of the vivacious flowers are by no means restricted to those of creeping habit, for among them we have such low-growing subjects as Daisies, *Polyanthuses*, Violets, Croci, Pansies and Auriculas. The Auricula-grower of today will be interested to learn that much care must have been bestowed on the cultivation of these flowers, for the cultivator is recommended to "complement them with sheds and shelves of boards one above another." Double and striped varieties were much sought after, and the "beautiful powder" was much appreciated. In No. 4, hardy annuals, we have Snapdragons, Lark-Heels, Annual Stocks, Sunflowers, Nigella, Marigolds, Poppies, Candia-Tufts and, what will strike us nowadays as curious, Scarlet Beans. This is our modern Scarlet Runner, and was at one time greatly valued, so much so that it was "introduced out of the Kitchen into the Flower garden" (Laurence).

In the last division of half-hardy annuals we have French and African Marigolds, *Amaranthus* (Cocks-comb), Balsams and Marvel of Peru, by some called "The Wonder of the World." One could make these lists much longer, especially if one were to include plants that were just becoming known and grown and if one were to take in the flowering shrubs like Lilacs, Jessamines, Roses, Sena-trees, Labrumms, &c. Enough has been said to give readers an idea of the flowery and fruity contents of early eighteenth century gardens.

JOSEPH JACOB.



THE NEW PERPETUAL-FLOWERING CARNATION TRIUMPH.
(See page 87.)

He held a high position in horticultural circles, and as "the contents of his works are evidently the results of his own observations, made during the experience of many years' practice" (Johnson's "History of English Gardening"), I think

in the flowering shrubs like Lilacs, Jessamines, Roses, Sena-trees, Labrumms, &c. Enough has been said to give readers an idea of the flowery and fruity contents of early eighteenth century gardens.

GARDENING FOR BEGINNERS.

INDIAN OR CHINESE AZALEAS.

AZALEA INDICA and its varieties, collectively known as the Indian or Chinese Azaleas, are unquestionably among the most beautiful of hard-wooded greenhouse flowers. Moreover, they are evergreen, in this way differing from the hardier race known as Ghent Azaleas. The flowering season of the Indian Azaleas is from late autumn until early summer, and during this time blossom may be had almost continuously. Unfortunately, the plants do not always flower as freely as expected; indeed, one sometimes hears complaints of them not flowering at all. Now, this is invariably due to the wood not being well ripened in the sun in the summer months. It is quite a common error among amateurs to keep their Azaleas in the greenhouse during summer, possibly under the shade of Palms or in some overcrowded position. Under such circumstances the plants never have an opportunity to ripen their wood, and a poor show of flowers is the result.

Growers who succeed best in the cultivation of these Azaleas keep the plants in the greenhouse from about November till early June. For the remainder of the year the plants are either stood in cold frames with the lights off or plunged in the open. In Southern counties it is quite safe to turn the plants out of their pots and plant them in open beds, and there they may remain until potted up in the autumn for the embellishment of the greenhouse in winter. The repotting of Azaleas in the case of those plants grown entirely in pots is rightly carried out in the spring of the year when flowering has ceased, but before new growth is far advanced. As this season will soon arrive, it is a suitable time to give a few explanatory notes on how the work should be performed. A very good potting soil may be made from peat, fibrous loam, leaf-soil and silver sand. One-half the compost should be peat, and the other half may well be made up with equal parts of the remaining constituents. Remove all the crocks from the plant to be potted on, and loosen the ball of soil with the aid of a pointed stick.

In potting it is most important that the soil should be rammed firmly. It will not do to pot Azaleas in a peaty soil as one would pot a Carnation or a Chrysanthemum. The Azalea will require more ramming than either, and there is very little, if any, fear of getting the soil too firm. It should also be borne in mind that Azaleas resent deep potting. After potting it is well to keep the plants close for a few days and to syringe them overhead, especially on bright mornings. Thrip and red spider are the two worst enemies to contend with, and both may be kept in check by the judicious use of the syringe and an occasional spraying with an insecticide. The Azalea does not require high feeding, and may be satisfactorily grown without the aid of stimulants, at the same time a little diluted soot water and liquid cow-manure will prove beneficial just before flowering.

On this page is illustrated a fine plant of Deutsche Perle, pure, white, and probably the finest of all varieties. It is a capital sort for the amateur, since it forces well and flowers early. A few days after potting up, the plants should be

given as much light and air as possible, finally giving them the hardy outdoor treatment already recommended. SPARTAN.

TRANSPLANTING SEEDLINGS.

THE season has once more arrived when it is necessary to transplant many thousands of seedlings, even in a single garden of moderate size. The work is not hard, but trying, sometimes so much so that the worker becomes impatient and the seedlings are not properly dealt with, and very unsatisfactory results follow. All seedlings grown in pots, boxes or pans under glass are liable to be much drawn up if not carefully treated during their earliest stages of growth. If they are, it is a difficult matter to transplant them without doing damage to the long, delicate stems. Great care

and to prevent this happening, and for the general well-being of the plants, early transplanting is advisable. Procure some clean pans, well drain them, and then three-parts fill them with finely sifted loam, leaf-soil, peat and sand. Put some sand on the surface, water thoroughly, and with two small pointed sticks transfer the seedlings, while the latter have only the two seed leaves, to the prepared pans. Both soil, sticks and seedlings must be kept moist while the work is being done. Just press the tiny roots into the surface of the soil, and shade from bright sunshine afterwards. SHAMROCK.

THE GREENHOUSE GRAPE VINE.

MANY amateurs who possess greenhouses have the ambition to grow a few Grapes in them in



AZALEA DEUTSCHE PERLE, A CAPITAL PLANT FOR THE AMATEUR'S GREENHOUSE.

must be taken to press down the soil very gently around the roots only, and not against the stem at all. Stocky seedlings with plenty of fibrous roots, such as Asters and Marigolds possess, are easily and satisfactorily transplanted. Care is needed in dealing with seedlings of Stocks, young Cauliflowers and others of a similar growth. The majority of annuals should be first transplanted 2 inches apart; but Marigolds, Phlox Drummondii, Ageratum, Petunias and Salpiglossis require a space of 3 inches each way between them. From these quarters the seedlings should be transferred to the nursery beds prior to being planted in their flowering borders.

The compost, which must be rather light and sandy for the first transplanting of annuals and similar kinds, should be passed through a quarter-inch mesh sieve; for early seedling vegetables through a half-inch mesh sieve. Tiny seedlings, such as those of Begonias and Gloxinias, must be dealt with in a special manner. The seedlings are liable to damp off wholesale while very small,

in addition to the usual flowering and foliage plants grown in such structures. For the benefit of the pot plants a certain amount of artificial heat must be maintained during the winter and spring months. This heat induces early growth of the Grape Vine, and care must be taken to secure for the young Vine shoots all the light possible and to avoid undue crowding of the shoots by timely disbudding. Disbudding means removing, when about one inch long, all young shoots, except one, from each spur on the Vine-rod. If the embryo bunch can be seen in a shoot, retain that one; but the strongest shoot is generally the best. The Vine-rod is usually too close to the roof glass; it should be at least 15 inches below the glass. If the wires are fixed too near, the Vine may be looped to them by stout twine. Syringing will not be necessary, as there will be sufficient atmospheric moisture in the house owing to the presence of the pot plants. Ventilate without creating a direct draught upon the young shoots. B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Hyacinths.—These should now be showing their flower-spikes in the majority of cases, and will be greatly benefited by occasional applications of liquid manure-water, properly diluted. Elevate the plants near to the glass, so that the foliage advances sturdily, and place a neat stake to each plant.

Aspidistras.—The present is a good time for dividing and repotting any plants that have become pot-bound. Excellent plants for decorating may be had by potting the divided portions into 5-inch pots. Water carefully for a time, keeping the plants in a brisk, humid atmosphere, and, if possible, plunge to the rims of the pots in a mild hotbed.

Bedding Plants.—Cuttings may now be taken of *Iresine*, *Mesembryanthemum cordifolium* variegatum, *Ageratum* and *Lobelia* from the stock plants. Insert in a fairly fine sandy soil in either pots or boxes, and place in a warm house.

Edging Plants for Greenhouses.—These will need potting or increasing. *Isolepis gracilis* does well in a cool house. Old plants will need dividing, potting nice young pieces into 3-inch pots. Take cuttings of *Panicum variegatum*, which succeeds best in a warmer structure. *Abutilon vexillarium* is a good plant for a cool house; so also is *Nepeta Glechoma variegata*, while *Tradescantia zebrina variegata* and *Pilea muscosa*, the Artillery Plant as it is commonly called, succeed well both on the stages in the shingle or underneath the stage in the intermediate or stove house.

Cyperus alternifolius is a most useful plant and very accommodating. This may be increased by cutting off the stem about an inch below the umbel of leaves, just shortening back the tips of the latter and inserting singly into well-drained 3-inch pots in a sandy compost, when young plants will soon be formed.

Begonia Rex.—The beautiful varieties of these may now be increased by laying the leaves on a pan of sandy soil or on the fibre in the propagating-pit, first cutting through the ribs of the leaves in a few places and covering with a little silver sand, when small plants will be formed that can afterwards be potted up.

Begonia Gloire de Lorraine.—Take cuttings of these as soon as possible and strike them in a warm pit. These, too, may be increased by leaf propagation if cuttings are not plentiful.

Peach Trees.—Admit air cautiously to houses containing trees that have started into growth, especially when cold winds prevail. Disbudding of the earlier-forced ones will now need attention. The two chief objects to be kept in view when doing this work are judicious thinning of the growth and preserving a well-balanced tree for next season. Disbudding should always be done gradually, so that no check is felt. Commence first by removing badly-placed shoots.

Vines.—Early Vines will need considerable attention. Thinning of the weakest shoots from each break should be carried out before they get too large, selecting the one with the most promising bunch. I do not advocate tying down the shoots to the trellis until after the flowers are set, as the maximum amount of light ensures a freer set and there is less risk of breaking. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Box Edgings.—I make a practice of trimming the greater part of the edging of Box in weather when no other outdoor operations can be performed. Any portions that have become blank through plants dying since the last trimming should now be made up. Edgings of other plants are likewise cut into shape at this time.

Ivy.—This also is shear-pruned in the present month. It never needs to be so severely cut as to be bare, but sufficient leaves close to the walls remain to retain an even greenness. Ivy permitted to get rough through inattention should not be pruned now, but in summer, when, no matter how hard back it is cut, new growths are pushed out in the course of a few weeks.

Root-Pruning Shrubs.—Where the roots of shrubs, either single specimens or in hedges, encroach on flowering plants and were not cut in last autumn, the present time is very suitable for the purpose. It is the better way to keep the roots within bounds from the first; but even where this has been neglected, it is possible to root-prune the one half without the plants operated on showing any bad effects.

The Rock Garden.—The coarser-growing occupants may now be safely reduced in size to permit those which are less vigorous to extend. Most of the first-mentioned can be reduced by pulling pieces off, when a less trim appearance results than if they were neatly cut in. Pieces here and there may also be picked out of the central portion of such things as Cushion Pinks, Mossy Saxifrages and such-like, a slight dressing of sifted compost over everything completing operations.

The Bog Garden.—Primula cashmeriana and a few other things are now well on the move, and the surface of the bog should be cleaned of seedling weeds and material that has gathered during winter, while the stronger-growing plants should be confined to the positions allotted them. Bare parts should be slightly dressed with some light material. Bamboos do well in wet parts, and appreciate dressings of cow or sheep manure.

Shrubs for Decoration.—A selection of flowering shrubs is of much value at this season for vase furnishing, the Flowering Currants being good examples. We cut lengthened shoots of them and stand them in a boathouse in water till the colour shows, when they are used, opening beautifully in the vases.

Grass Verges.—An opportunity should be taken shortly to straighten lines and regulate curves. Where the edges are worn, the parts should be lifted 1 foot or so back and brought forward, and new turf brought in to make up the space left bare, or a few grass seeds may be sown after filling up to the level with soil. Patchy pieces of lawn should be dressed with finely-sifted compost, and later, should no grass appear, be sown with fine grasses.

Weedy Walks.—Grass has grown freely on gravel paths during winter, and where the walks are kept clean by hoeing, they must now be carefully hoed, left to dry and as carefully raked. Parts where only a few weeds have obtained a footing will be cleaned as effectually and with less labour by hand picking. R. P. BROTHERSTON.

Tyninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

The Weather.—The mild, damp weather which prevailed during the depth of winter caused buds of Roses and many kinds of plants to grow prematurely. The recent frosts will not have done any serious harm to such buds, and they will now retard buds of all kinds, which will prove beneficial.

Flower - Borders.—Examine large-flowered Daisies, and if soil or sand, generally caused by earthworms, be found in the centres, remove it and free the plants, as if left the plants would be seriously injured. Continue to dig the soil between the clumps of plants, and, if procurable, put in a liberal quantity of well-rotted manure. Carefully remove some surface soil from around Hollyhocks and replace it with rotted manure, and, to prevent slugs doing any damage, scatter some coal-ashes on it. Pick off faded leaves from tufts of Sweet Williams and surround the latter with ashes, as slugs are so fond of these plants. Trench and manure ground for Gladioli. Do not handle bulbous or other plants while they are in a frozen condition. Divide old roots of Michaelmas Daisies.

The Shrubbery.—Immediately after a frost has gone out of the soil examine all cuttings of shrubs inserted last autumn, and firmly tread down the soil around each one. Frosts lift cuttings and leave them loose in the ground. Plant Laurustinuses in borders near the edge of the lawn; they are charming flowering shrubs, and if given plenty of room make neat, bushy specimens. Plant standards of the Flowering Cherry in shrubberies. The Flowering Currant is a capital plant for growing in borders on the north side of a fence or low wall. Put in plants now. Surface-dress borders under shrubs with loam and manure mixed; it is better than digging and damaging the surface roots.

The Vegetable Garden.—Trench all the soil possible in this garden. Break up the subsoil, but leave it below. Leave the top portion in a lumpy state at present. Sow seeds of Broad Beans, such as Beck's Green Gem and Mazagan, in rows 18 inches apart. Sow on a warm border round-seeded Peas. If mice or rats are troublesome, damp the seeds and roll them in red lead prior to sowing them. Watch the Broccoli plants and place a few leaves over the flowers to protect them from frost. Remove decaying leaves every week, as if left they soon become objectionable. See that Beet, Carrots and Turnips stored in trenches are safely covered from severe frosts. Be equally watchful in regard to Potatoes.

The Fruit Garden.—Stake newly-planted trees. Mulch with half-rotted manure if not already done. Burn all prunings. Make good the defective labels.

The Greenhouse.—Aspidistras which have filled the pots well with roots must now be repotted. Divide old plants if the cultivator desires to increase the stock. Fibrous loam and leaf-soil in equal proportions, with coarse sand, form a suitable compost. Warm all soils used for the potting of plants generally. Keep the young tips of Rose shoots away from the roof-glass. Fumigate or vaporise if green aphides are troublesome. Put on flowers of sulphur if mildew appears on the Rose leaves. Water plants during the forenoon.

The Garden Frames.—Pinch off the points of Calceolarias to cause side shoots to grow. Sow seeds of Petunias and Pansies. Sow early Brussels Sprouts in a box. Bulbs must be freely ventilated. TOWN GARDENER.

NEW AND RARE PLANTS.

ONLY the following three plants were granted awards at the Royal Horticultural Society's exhibition held on February 6.

FIRST-CLASS CERTIFICATE.

Odontoglossum Merlin.—One of the most beautiful *Odontoglossums* that have been shown for some considerable time. The flowers are of perfect form, and nicely set upon a well-built spike. The parentage of this charming variety is unknown, but it has the appearance of a remarkably fine *crispum*. It is blotched purplish brown, and the perianth is nicely waved. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

AWARDS OF MERIT.

Carnation Triumph.—We believe there are two *Carnations* of the Perpetual-flowering class bearing the above name, one being of British origin, the other American. That now referred to originated on this side of the Atlantic, having been raised by Mr. Engelmann, Saffron Walden. It is of crimson-scarlet hue, with just sufficient of the fire of the latter colour to render it bright and effective. As shown, the flowers were of medium size only; and while we were not strongly impressed with its petal quality or substance, we were distinctly pleased with its perfume, which was unmistakably that of the Old Clove. Exhibited by Mr. C. Engelmann, Saffron Walden. For illustration see page 84.

Odontoglossum Memoria Lily Neumann.—A robust and free-flowering variety, judging by the vigorous flower-spike shown, carrying twelve fully-expanded flowers of good size. Both petals and sepals are heavily blotched chocolate red, so as to almost cover the flower. The petals are fringed white, with just a suspicion of purple. Shown by J. Gurney Fowler, Esq.

NOTES ON RECENT NUMBERS.

Winter Jasmine (page 30, January 20).—Useful as this fine winter-flowering shrub is when trained on a wall or fence, I always wish to see it on some very steep, wild rocky bank, where its habit of flinging itself about and trailing downward would be displayed to the greatest advantage. It is also charming when grown in some wild brake among stiff, twiggy bushes, such as Blackthorn and Hawthorn, which give it both support and protection.

Shrubs Under Deodar (page x., January 20).—I have some recollection of seeing ground under a large Deodar well clothed with *Berberis Aquifolium*. It grew right up to the trunk of the Cedar and had the appearance of being self-sown.

White Rose for London (page x., January 20).—The *rugosa*s are among the best *Roses* for London gardens; therefore the fine hybrid *Blanc Double de Coubert* is a sure success. Of the good kinds that have *rugosa* for one parent, it appears both in habit and constitution to be one of the nearest to the type. The remarkably bold, deep green, polished leaves, rather exaggerating the already good qualities of the *rugosa* foliage, would be desirable even without the bloom; but, in addition, the flowers are some of the best of their kind, and are of a singularly pure, almost bluish, white, a colour that with perfect truth may be called snow white.

Fuchsias (page xii., January 20).—Though the modern *Fuchsia*, with its large size and widely

inflated petticoat, is, no doubt, a showy thing, yet for a purer type of beauty of form and for a special kind of attractive charm one must go back to the earlier kinds, rather than look for these desirable qualities among their descendants. Nothing can be prettier, either as plants in vases or for other ways of outdoor use, than the fine old single white and scarlet *Mme. Cornellison* or the even more fully-bloomed *Delight* of the same colouring, raised, I believe, by Messrs. Cannell.

Snow and Seeds (page 42, January 27).—This is a very useful piece of knowledge, viz., that the seeds of alpenes and of many other hardy plants, if sown in January or even earlier, either in the open ground or in pots or boxes out of doors, when for some days or any length of time they have a covering of snow, will "stratify" and germinate much more quickly. Many years ago I learnt it from Mr. Correvon, the distinguished botanist of Geneva, and have always treasured it as a valuable rule of garden practice.

Roses and Clematis on Fence (page 45, January 27).—In this note the fence in question is, no doubt, some frontier of dressed garden ground, the kinds of *Clematis* being those with large flowers and the *Roses* among the showiest; but, further away, on some quite rough fence, effects perhaps less brilliant, but with quite as much charm and interest, may be gained by using the type *Clematises*—*montana*, *Flammula*, *paniculata*, *graveolens* and the native *Vitalba*—with the single and half-double forms of rambling *Roses*. Of these, *Evangeline*, of American origin, is singularly beautiful. The flowers are single and something like a very large Dog Rose of firmer substance, and are borne in generous terminal bunches. G. J.

THE FRUIT GARDEN.**THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.**

(Continued from page 68.)

Selecting and Planting the Trees.—To a novice in the business my advice is to entrust the work of planting and supplying the trees to a nurseryman of a good standing. But to those who claim to have some practical knowledge of the work and wish to carry it out themselves I would say, Select your own trees, and see that the stems are straight, the bark sleek and likely to be responsive to easy and free expansion, not hide-bound and hard or the trees old. Three years old is quite enough. The former conditions are a sure sign not only that the trees are all it is desired they should be, but are a guarantee that the roots are satisfactory as to character and quantity. Beware of old, large trees, seemingly good to look at, such as are often to be seen at auction sales, which may be offered cheap. They invariably prove disappointing as compared with younger trees.

Stocks.—The Apple is usually grafted on two stocks, that is to say, the Crab, commonly termed the free stock, and the Paradise, termed the dwarfing stock. Standards should be worked on the free stock, and bushes, espaliers and cordons, in the case of most varieties, on the dwarfing stock.

Planting.—As mentioned before, this can be successfully carried out any time between the first week in November and the last week in February, so that there is yet time left for those wishing to plant. If it is arable ground,

and it has been deeply broken up by the steam plough and cultivator, or by trenching, there will be nothing to do but to dig out the holes, say, 2 feet deep, breaking the bottom pan with the fork 1 foot deep, still leaving it at the bottom. Return the poorest of the soil to the bottom and reserve the best for the top strata of 1 foot; and, as mentioned before, if the soil is of a rather poor nature, add half a barrow-load of manure to the top soil of each tree, well mixing it with the soil. Fill the hole with soil to within 7 inches of the surface, treading it in fairly firmly, leaving the top of the soil in a concave form, something in the shape of a saucer, so that when the roots are laid down their tips will be in a more or less upright direction. Experience proves that the new roots inserted when this system of planting is adopted invariably show a tendency to rise upwards, which is what all good growers wish for, instead of striking down to the subsoil, as they are more likely to do if planted on the level or when the centre is higher than the sides. The hole being now ready to receive the trees, let each tree be taken in hand and its roots carefully examined. The larger roots should be shortened (if they have not already been done) to within 15 inches of the root-stem of the tree, and each of the smaller roots also shortened, the slant of the cut in all being on the top side of the roots, so that the young roots emitting from the cuts in due course will assume an upright direction instead of a downward one, which would be the case were the cut to be on the under side of the root. Cover the roots over carefully with soil after they have been laid on the surface in regular order, finally treading down the soil firmly and, in the case of standards, staking the trees and giving the surface of the soil over the roots of each tree a mulching of rich, rotten farmyard manure 3 inches deep.

Pruning the Young Trees.—Some growers favour the non-pruning of young Apple trees the first year. I will not enter into the merits or demerits of this practice, my notes having already, I am afraid, been unduly prolonged. But I must say that I prefer to prune the young trees as soon as planted. The trees at this stage will be furnished with from five to eight (more or less) leading young shoots of the previous year's growth. These are usually from 1 foot to 2 feet long. Each of these should be cut back by half its length, taking the precaution to cut to an outside bud. This cutting back will secure an even break of side shoots during the current summer down to the base of each shoot so cut back.

Protecting the Trees.—The simplest and, at the same time, most effective way of protecting standard trees against rabbits and sheep is by tying Thorn or Gorse faggots round the stems of the trees.

Selection of Varieties.—As regards the growth of the Apple for market, the grower will have to be content with a very limited number of varieties. Probably that grower who only grows one sort, and that Bramley's Seedling, will be the most successful in the end. Another aspect of the question in relation to varieties is as to whether it is better to plant largely of early, midseason or late sorts. It is a mistake to grow many, or, in fact, any midseason sorts. The market is then glutted and the prices rule low. It is better to grow early and later sorts only, and more of late than early sorts. OWEN THOMAS, V.M.H.

(To be continued.)

THE VALUE OF DWARFING STOCKS.

THE Apple grafted upon the Paradise and the Pear upon the Quince have now become general in the great majority of gardens. This is more particularly the case where much wall space available for fruit tree culture exists, or, on the other hand, in the open where bush and pyramid trained trees of moderate dimensions are alone permissible. That the use made of these stocks is of immense value cannot for a moment be doubted, as, apart from the precocity of cropping they engender, the very prospect of obtaining fruit in the course of a couple of seasons from the time of planting is an incentive of interest to many who could scarcely entertain the idea of waiting for a period varying from five to ten years before any substantial returns by way of produce could be expected from trees grafted upon the Crab and seedling Pear stock respectively. Passing in review over various plantations visited, it becomes at once apparent that, in very many instances, the great difference existing between the root system of the two stocks is not so fully recognised as it might be, to the advantage of the trees in the matter of growth and their continued fruitfulness and longevity. To be brief, it may be stated that the Crab or wild Apple is very free-rooting, sending out numerous strong feeders, which in strong soil ramify in all directions, causing a corresponding vigorous top growth, much of which has to be removed as useless shoots at the pruning season, and until this excess of vigour is checked, either naturally or by judicious root-pruning, well-ripened and productive fruit-buds will be but sparingly produced. Dwarfing stocks, on the other hand, have but few, if any, strong roots, and such seldom wander far from the base of the tree; hence the soil in the course of a very few years is completely occupied with masses of fibrous roots in every way satisfactory from the cultivator's point of view. To maintain this very pleasing state of matters for a number of years, a course of manurial stimulants must be applied yearly, preferably at intervals during the season of growth, when the crop borne and the appearance of the foliage convey to the observant attendant a fairly correct idea of what is wanted, whether this be a copious supply of clear water only, or other in which a quantity of some approved fertiliser has been dissolved.

The rainfall of the past ten weeks has been exceptionally heavy, and to this heavy snowfalls have been added, which, drifting deeply against walls and slowly dissolving there, have thoroughly permeated the whole bulk of soil with moisture, so that now the roots are in the best possible condition to receive and assimilate, with returning warmth and vitality, any nutritive dressings by way of soil or manures that are most readily obtainable. As already stated, dwarfing stocks are very fibrous-rooted, and as such do not penetrate deeply; hence the surface soil cannot be much disturbed without doing damage. When the weather is settled and the soil easily worked, the surface may be lightly pointed over with a fork a few inches in depth or until roots in quantity are disclosed. Carefully remove the soil thus disturbed, and replace it with the best turfy loam available. This is best for use after having been cut and stacked for a few months to kill the strong roots of grasses it contained, also to render its manipulation by way of pulverisation more easily accomplished. If thought necessary, lime rubbish, burnt ash, or manures, such as bone-meal or superphosphate of

lime, may be incorporated with it; but if of good quality and fibrous, these are not generally necessary. Spread the compost evenly over the whole surface as far as, or slightly beyond, the radius to which the roots extend, and make it firm by treading or other means. Trees that have been frequently treated in this way produce such masses of surface roots that the reduction of inert soil cannot successfully be carried out; furthermore, an undue height or mound about their bases renders further additions of new soil undesirable. In such cases some approved form of easily-applied manure, such as bone-meal or basic slag and kainit in equal parts, applied at the rate of from 2oz. to 4oz. per square yard and slightly pointed in, will form a good substitute. Either, however, should be applied at once for the trees to reap full benefit therefrom during the current year. Failing any of the courses named, there still remains a very potent source for good in the drainings from cattle-sheds, where such are collected into tanks, or at present, and while the wet weather lasts, the liquid exudations from manure-heaps can often be collected and, after dilution, if very strong, be given to any trees that are considered most in need of assistance to restore their wanton health and vitality.

JAMES DAY.

Galloway House, Wiglowshire.

NURSERY NOTES.

THE FASCINATION OF TESTING SEEDS.

THE average reader may reasonably be pardoned for displaying ignorance when the testing of vegetable and flower seeds is spoken of or written about, because hitherto but little relating to this important and fascinating phase of seed-growing has been revealed. We use the word "important" advisedly; the testing of seeds is very important indeed to those whose business it is to sell the seeds, and also to those who have to grow crops from the seeds that are supplied.

Naturally, those who do not understand the process will ask: Why and how are the seeds tested? Seeds of both vegetables and flowers are tested to prove their germinating or growing power, so that the seedsman may know that if failures do occur, it is not the fault of the seeds, but is due to something wrong in the treatment they receive, or to other extraneous conditions over which he has no control.

The way in which seeds are tested was amply demonstrated to us recently at the noble buildings of the old and well-known firm of Messrs. James Carter and Co. at Raynes Park, near Wimbledon, buildings that must be familiar to every traveller on the L.S.W.R. main line. During the past year, with the thoroughness characteristic of the firm, Messrs. Carter have added to these buildings, which were opened last year to supersede their old premises at High Holborn, extensive seed-testing laboratories, fully equipped with the latest testing appliances, so that they now have every facility for ascertaining the germinating power of all the seeds supplied by them to their customers.

Briefly, the method adopted is as follows: When a consignment of Peas or other seeds comes into the warehouses, it is, first of all, thoroughly cleansed by means of patent, electric-driven machines; then large seeds, such as Peas and Beans, are hand-picked, so that discoloured or

damaged seeds which the machines may have missed are eliminated. After going through these preliminary processes, the seeds are ready for testing. A sample is taken from the bulk, twenty-five, fifty, or one hundred, according to the size of the seeds, carefully counted and any impurities noted. These counted seeds are then placed on prepared squares of thick, moist felt, or circular discs of moist paper, the former for Peas and Beans and the latter for smaller seeds, and stood in the frames or glass cases, which are maintained at a suitable temperature to induce germination. After a given time, and when the seeds ought, if they are up to the high criterion set by the firm, to have germinated, each set is carefully recounted and the percentage germinated carefully noted. As all records are carefully kept in ledgers, the germinating or growing power of all seeds supplied by the firm is known; and, needless to say, should any fail to pass the tests, they are not sold, but destroyed. In many instances, notably in Beet-roots, this test of germinating power is also a test of trueness of stock, the seedlings showing, to the experts employed in the work, characteristics that enable them to tell whether rogues are present or not. The testing of trueness of stock, however, must, to a very large extent, be done under more natural conditions, and this is where the extensive trial-grounds that surround the buildings at Raynes Park are so valuable. Travellers on the railway referred to cannot have failed to notice the numerous labels that are dotted about, each representing a stock of some vegetable or flower such as Messrs. Carter supply to their customers. Thus we see how important the testing of seeds is to both vendor and customer—an operation that costs the first-named a very considerable sum, but one which gives satisfaction to both.

In addition to these new seed-testing laboratories, Messrs. Carter and Co. have had a large kitchen and dining-rooms built for the use of the staff, believing that contented and happy work-people study the interests of the firm and the firm's customers. Last year we referred to the main building, which had then recently been opened, and on the occasion of our recent visit we were pleased to note the clean and business-like aspect that characterised the whole place.

THE EDITOR'S TABLE.

Greenhouse Flowers from Berkhamsted.—

Mr. A. G. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted, Herts, sends a most charming collection of greenhouse flowers, all of which show signs of excellent cultivation. Mr. Gentle writes: "I am sending a few flower-sprays for your table of the following kinds. *Acacia cultriformis* is, in my opinion, the premier of Acacias, with its drooping habit and yellow blossoms, which just now are quite cheerful. The specimen here is about twenty-four feet by fourteen feet, and is trained on the roof of the conservatory. *Primula malacoides* is just now in full beauty. I have two dozen plants in 4½-inch pots, and there are an average of thirty spikes out on a plant. Some of the spikes have five whorls; there are two shades of colour, as you will see. *P. rosea* is much stronger in growth and flower. *Grevillea Pressii* and *Phylica ericoides* have been in flower since Christmas. The *Rondeletia*, a nice orange red flower, is from the stove-house. *Hardenbergia macrophylla*, with its small mauve flowers, has been out three weeks, and looks like continuing for another three weeks."

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

NOTES OF THE WEEK.

Our Spring Number.—Our next issue, dated March 2, will be a specially-enlarged spring number, and will contain many articles of more than usual interest. These have been written by the best living authorities on gardening, both professional and amateur, and will, we feel sure, prove both interesting and useful to our readers. The illustrations, too, will be a special feature, and a coloured plate of new *Gaillardias* will be included. As we anticipate a large demand for this issue, we advise those readers who require extra copies to order them in advance. The price will, as usual, be one penny.

Green-leaved Aucubas.—These are undoubtedly among the best evergreen shrubs we possess, while for town planting they are unequalled. Why the spotted-leaved forms have been so extensively planted in preference to those with rich deep green leaves it is difficult to understand. One is as readily propagated as the other, and they are equally free in growth. *Aucuba* bushes are freely used in unfavourable positions in most gardens. The effect, however, with the spotted-leaved kinds is not so pleasing as it would be if the leaves were a bright rich green.

The Sea Buckthorn.—In making a selection of hardy trees and shrubs with ornamental fruits, special attention should be given to those on which the fruits remain in good condition for a lengthy period. The Sea Buckthorn (*Hippophaë rhamnoides*) is still (February 15) bright with the orange yellow fruits. With the requisite training in a young state, the Sea Buckthorn will develop into a small, shapely tree. For effect it is, perhaps, best seen in bush form, 6 feet to 8 feet in height, in large groups by the water-side. It must be borne in mind when planting that there are male and female forms. Three male plants will be ample in a group of eighteen or twenty bushes.

Asparagus sarmentosus.—When well fruited, this South African *Asparagus* affords a very showy plant for a warm greenhouse, in which structure it may be used as a pillar plant or for a hanging basket. Even when not in fruit, its long, plumose branches are very effective, but when large numbers of bright red berries are seen among the leaves, the result is much finer. Some people fail to obtain a good crop of fruit, and it is possible that this is due to keeping the plants in an over-moist atmosphere and subjecting them to too much shade. A well-fruited example was noted recently growing against a pillar of a fairly dry, light house in a position where it was fully exposed to sun for the greater part of the day. Planted out in loamy soil it had made good growth, and the berries appeared in profusion. When exposed to full sun, it sometimes happens that the colour of the

leaves is paler than is the case when the plants are grown in a moist and shaded structure, and this may account to some extent for the apparent preference for the latter method of culture.

Sudden Failing of Elm Branches.—The theory respecting the sudden falling of large Elm branches without any apparent cause on a calm day is that it is caused by a sudden flow of sap into the branches. Sudden changes in the weather and temperature will cause the sap to run up, as, for instance, heavy rain following a hot day in autumn, or rain after a long spell of drought.

Testing Carnation Cuttings.—An interesting article published as far back as 1900 describes how diseased cuttings of Carnations are distinguished at Cannes. A piece of board or tin pierced with holes is placed over a vessel of water and the cuttings are inserted in the holes, so that their cut ends dip slightly into the water. After twenty-four hours the mycelia of the infected cuttings made its appearance at the cut ends as white floccose wefts.

Victoria Medal of Honour.—At the recent annual meeting of the Royal Horticultural Society it was announced by the president, Sir Trevor Lawrence, Bart., K.C.V.O., that Lieutenant-Colonel D. Prain, C.M.G., F.R.S., Director of the Royal Botanic Gardens, Kew, and Mr. E. H. Wilson, the assiduous plant-collector of China fame, were the recipients of the Victoria Medal of Honour in the places of the late Sir Joseph D. Hooker, O.M., F.R.S., &c., and of the late Mr. James Douglas. We feel that this honour could not have been more worthily bestowed. Sixty-three medals (one for each year of Her Majesty Queen Victoria's reign) are awarded by the Council of the Royal Horticultural Society to distinguished members in the world of horticulture.

Androsaces on Low Walls.—An admirable example of the manner in which some plants not often considered easy to cultivate can accommodate themselves to certain circumstances is shown by the fact that several *Androsaces* will grow admirably on the flat top of a low wall with a minimum of soil, 2 inches or 3 inches being sufficient. In the attractive garden of Mr. John Platt, Hyning, near Carnforth, this may be seen, as on the top of a low wall 4 feet or 5 feet high such *Androsaces* as *A. sarmentosa*, *A. lanuginosa*, *A. Chumbyii* and *A. arachnoidea* are all thriving, and last year bloomed in a satisfactory way. A few stones laid about them will ward off any excessive drought which might affect these plants in such a position. Rarely, indeed, does one see healthier plants than those at Hyning, where Mr. W. G. Watson, Mr. Platt's gardener, takes much care of the good collection of alpine.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Hardy Cyclamen.—These lovely little flowers have only one defect—they are too small. Hybridisation with the larger-flowered *Cyclamen persicum* seems quite possible for those who have the skill and the appliances. As the advertisements say, "Now is the time," for both the indoor and the outdoor varieties are in bloom.—R. [Mr. F. Herbert Chapman, who raised *Freesia Chapmanii*, has been working on the lines suggested by our correspondent for some time.—En.]

Polygala oppositifolia.—I came across a nice plant of this the other day, and it seems to deserve a note for the sake of those who wish to grow a flower which is not too often seen, and who have a cool house in which it will flower during the winter months. Its terminal racemes of purple flowers look extremely well on a good-sized plant, where the naturally arching stems are allowed to develop to their length of 3 feet or 4 feet. The grower with whom I saw it prunes it rather hard back after the flowering-time and encourages it to break from the base by liberal treatment, repotting it when it begins to break.—A. M. D.

Different Tastes Among Flower-Lovers.—A few weeks back, in an article upon single *Chrysanthemums*, if I remember aright, a correspondent made the remark that it was an extremely good thing there were so many different tastes among flower-lovers. This seems strikingly illustrated in your issue of February 10, where, in an article on Sweet Peas, a correspondent states that "the grandiflora or plain-hooded type is doomed . . . but for beauty and grace the waved varieties are unbeatable," while another, a little further down the same page, bewails "the deplorable destruction of that once-beloved blossom, now, alas! long robbed of its true form and fragrance," and says that he and others "have privately lamented the loss of the Sweet Pea as we knew and loved it some thirty years ago, and heartily despise that deformed and too often scentless flower that now bears its name."—A. LAWRENCE.

An Error in Sowing Small Seeds.—Your correspondent A. Allardice does well to draw attention to this matter on page 66 of the issue for February 10, as at the present time many inexperienced cultivators may learn a few valuable hints from the notes on the subject. Your correspondent does not mention whether he waters the soil in the pots prior to sowing the seeds. I gather he does not water it. I am in favour of using the compost in a nice workable condition, and, having filled the pot, pan or box to a certain point from the rim, making the surface even, and then watering carefully through a fine-rosed watering-can. Having done this, the soil is left to drain for two or three hours; then the seeds are duly sown on the surface and covered lightly with fine dry soil, no watering being done on the surface afterwards, and the soil never cracks nor becomes hard. In many instances the soil remains sufficiently moist to ensure the germination of seeds; if not, the pans or pots are immersed. In the case of very fine seeds, such as tuberous *Begonias* and *Gloxinias*, a light sprinkling of silver sand is put on the surface of the watered soil and the seeds very gently pressed into it, no covering soil being put on.—B.

The Madeira Orchids.—The Madeira Orchis (*O. foliosa*) is a plant which never becomes cheap, although it has been a long time in cultivation, and in some gardens increases fairly well, though not rapidly. The demand is apparently the main cause of its high price, but it is certainly a flower worth paying something more than the ordinary cost of hardy plants to secure. Half-a-crown or 3s. 6d. is about the usual charge for this handsome plant, and those who establish it do not, in the long run, rue their investment. In good, moist soil it forms nice plants with large, broad leaves. The flower-spikes are from a foot to two feet high, and bear a number of rich purple-red flowers in summer. It is a plant which looks very handsome when it is established. A soil of peat and loam with some sand suits it well, and it should never suffer from want of moisture at the roots. It is usually cultivated in sun, but I know many good plants in a partially-shaded position.—S. A.

Gypsophila paniculata.—The *Gypsophilas* are a small family, of light and graceful habit, which will thrive in the ordinary border and produce their fairy-like spikes from June to September. *G. elegans alba* is usually in great demand for decorative purposes, especially among the Sweet Peas, while the variety *rosea* and the dwarf rose pink *muralis* are also favourites with many. It is, however, to the one named at the top of this note that I would particularly call attention. This is a hardy perennial, and no collection of herbaceous subjects can afford to be without this useful plant. It presents a gauze-like appearance, growing about two feet high, and generally bears a mass of small white flowers, which may be cut in sprays according to the size required. With many people flowers are rather scarce during the winter months, and to these I would suggest that they cut off a quantity of sprays of *G. paniculata* when the flowers are fully expanded and arrange them in vases, where the sprays will gradually dry and remain in beautiful condition for several months; in fact, at the time of writing (February 3) I have a very pretty vase of them on the table.—S.

Primula malacoides.—This *Primula*, with its lovely pale mauve flowers, borne tier upon tier, is a welcome addition to the winter-flowering plants for the greenhouse and conservatory. The stems, stiff and erect, need no support, and when the side shoots, which are produced in profusion, are in bloom the plant is quite beautiful. Grouped with *Primula stellata* the effect is very fine indeed. It is also very useful for cutting, and the lightness of its long spikes renders it ideal for table decoration. Seeds should be sown in pans in or near the first week in August, and be germinated in gentle heat. When the seedlings are large enough to handle, they should be potted singly into 3-inch pots, the compost to be two parts good loam, one part leaf-mould, and one part equally of coarse sand and road grit. Placed in a cold frame the young plants grow rapidly, and in a few weeks should be ready for the final shift into 4½-inch or 6-inch pots. Several plants arranged in deep, round pans provide a very pleasing show. The compost used now should have, in addition to the ingredients above mentioned, a little well-decayed cow-manure and a sprinkling of bone-meal and soot. Stand the plants on a shelf in the cool greenhouse, with free ventilation without draughts. Water must be applied sparingly, just enough being given to prevent the plants flagging. In December the flower-spikes appear, and during the succeeding two months the plants will furnish a

splendid show of flowers.—A. BROTHERSTON, *Henley-on-Thames*.

Salvia Pittieri.—I see in the February 17 issue, page 78, a letter on *Salvia Pittieri*. Last year I had sent me from the United States a packet of seed labelled "Scarlet *Salvia*," which, I think, must have been *Salvia Pittieri*, as it grew exactly as described by Miss Randolph, with the difference that most of my plants were 4 feet high. I planted them in a double row, with an edging of *Violas* in two shades of blue, and the effect throughout the autumn was excellent.—C. L. C.

The Poison Ivy.—I have been much interested in reading the letters of your correspondents (page 79, February 17) about their experiences with Poison Ivy. This Ivy grows in the woods of my old home in the United States. Every new arrival on the estate used to be warned to leave it alone, and I only remember one case of poisoning from it, when the wife of our overseer was badly attacked after Blackberrying. She was very ill for weeks, her whole body being swollen and black. Her case caused much anxiety, and I think I am right in saying that her life was in danger at one time. Sugar of lead, I think, was the remedy. It does not poison everyone, but I cannot tell you why. Personally, I used to be able to handle it, and we children used to go among it freely without harm, as did everyone else on the place.—C. L. Cox.

Adonis amurensis.—This did not show its flower-buds with me this year until about February 12. It is not, however, in a position where it receives much of the scant sunshine of the season, as it is under the branches of a yellow-barked Dogwood, and is partially shaded by some other shrubs. This plant has been here for several years, and is doing well in a position which, though partially shaded, is of a dryish nature. I attribute a good deal of the disappointment experienced with this *Adonis* to the destruction of young plants by slugs, which, it is notorious, have a penchant for plants which have newly come to a garden, and also to the fact that plants seem a little difficult to pull through the second winter after being planted in the garden. I think the plants we sometimes receive are a little too old for safe transplanting, and that they frequently have sufficient strength in the roots to enable them to flower the first year, but that after that they frequently die.—T. F. B.

A Beautiful Italian Crocus.—The several forms of the lovely *Crocus Imperati* are now in bloom. The exterior of the outer segments is buff, either self-coloured or nearly so, or feathered and lined with deep purple. In an unopened condition the flowers are extremely pretty, but it is when they open out, as they do with but little sun, that the full beauty of the flower is perceived. The purple of the segments is accentuated by the orange anthers and stigmata and the yellow filaments, and a clump in bloom is a sight to be long remembered. It is also a cheap species to buy, so that it may be planted in considerable quantity. There is a white variety named *albidus*, but this is usually found to be less enduring than the other; and one with rosy-coloured segments, which seems unobtainable, is named *Reidii*. Of the ordinarily coloured *Crocus Imperati* there are sometimes offered under the name of *C. l. longiflorus* some handsome, large-flowered varieties, but these differ little in other respects, save that they are larger than usual.—S. ARNOTT.

Improving Gravel Paths.—Undoubtedly gravel paths must be attended to during the winter months if they are to remain in good condition throughout the summer. The practice of your correspondent "C. T.," as advised on page 67, February 10, is sound; many paths only need such attention in order to keep them not only neat in appearance, but in really good condition. One of the biggest mistakes made, I find, is to leave the surface covered with too fine gravel immediately under the trees or their outspreading branches. In summer-time we often experience heavy rainfalls, and then the fine gravel is washed away. Some coarser gravel ought to be well rolled into the surface under trees.—SHAMROCK.

Planting Apple Trees.—I am indebted to "Apple Tree Grower" for his criticism of my note on the above (page 54, February 3). I always advise growers of fruit trees to obtain their trees from a reliable source. Firms of repute, having a thorough knowledge of the requirements of each individual variety, can always supply trees "worked" on suitable stocks for various soils, deep or shallow. When dealing with light, shallow soils, I would trench these as deep as possible, and plant trees on the Paradise stock rather deeper than they had been growing in the nursery. If trenching was impossible, then the method of preparing stations as described in my previous note would be adopted. This method would also be followed with bush, cordon or other trees planted in restricted areas; for it is necessary for the beginner to remember that the stock has great influence on the spread of the branches. One is seldom fortunate enough to find the ideal soil for Apples; but supposing such to be the case and the site was also favourable, I would trench this as deeply as possible and plant trees both on Crab and Paradise stocks to just the mark that they had been growing previously. It is almost impossible to plant trees on the Crab stock as shallow as can be done with the Paradise.—COLIN RUSE, *Lambay Island, Rush, County Dublin.*

Sparmannia africana.—Your correspondent "P." (page 42, Jan. 27), when writing of this old and useful plant, omitted to mention one very interesting feature, viz., the sensitiveness of the stamens. When lightly touched with anything, they will be seen to spread themselves outwards, and will occupy about double the space they did before. Other sensitive organs which are deeply interesting are the stamens of *Berberis* and the stigma of *Mimulus*. The stamens of *Berberis* when touched close up around the pistil. The stigma of *Mimulus* is two-cleft, and resembles a mouth with upper and lower lips. These lips, in a young flower, are reflexed, and, consequently, separated from each other. Touch them, and they immediately close up together. I would feel obliged if you or any readers of *THE GARDEN* would kindly give me the names of other plants having sensitive organs that respond to the touch. *Mimosa pudica*, *Dionæa muscipula* and *Drosersa* I am acquainted with. There are many plants whose leaves and flowers are affected by light and heat, but I do not ask for these.—T. S., *Westbury-on-Trym*. [The stamens of *Kalmia latifolia* respond as readily to the touch as do those of *Berberis*, and the anthers of *Schizanthus* are sensitive, likewise those of the Artillery Plant (*Pilea microphylla*). *Torenia Fournieri* has a sensitive stigma similar to that of the *Mimulus*. A number of Orchids exhibit a most remarkable response to the touch, as in the case of *Pterostylis* and *Masdevallia muscosa*, while the manner in which the pollen masses of

Catasetum are ejected is a matter of great curiosity.—ED.]

Cypripedium insigne Well Grown.—As an old subscriber to your paper, I am always pleased and interested in the illustrations of specimen plants, and as I have been fortunate this year in having two very fine plants of *Cypripedium insigne*, I had them photographed side by side, and enclose copies which may be of interest to you. There are twenty blooms on one and twenty-one on the other, and the pans are 18 inches across. I think you will agree that the plants are very healthy specimens, and if you consider them worthy of an illustration and the photograph is good enough for reproduction I should be very pleased.—C. H. CHURCHILL, *Claremont, Crescent Road, Enfield.*

Primula Rusbyii.—I observe in the "Year Book" of the National Hardy Plant Society a note on this *Primula* in the course of an article on "Some of the Rarer Primulas," by Mr. John Macwatt, Duns. The writer of the article states: "*P. Rusbyii*.—A Rocky Mountain species; has proved in my experience one of the most intractable plants I have come across. I have grown it for several years, and have never succeeded in



THE LADY'S SLIPPER ORCHID, *CYPRIPEDIUM INSIGNE*, GROWN BY A READER.

flowering it." This note induces one to ask the experience of others with this *Primula*. Not many professionals even will be able to say, "I have grown it for several years," seeing that it is not only troublesome to flower, but also to grow. I think even Mr. Reginald Farrer will be ready to acknowledge this, as I see that his reference to it in "My Rock Garden" is confined to the following: "Now sliding briefly over *P. Rusbyii*, a queer, deciduous Mexican with dark brownish-purple flowers, we come to the glory of the bog-*Primulas*." The latter is, of course, *P. rosea*. I managed to pull *P. Rusbyii* through two or three seasons by planting it on a terraced rockery, facing south-east, in loam, peat and sand, with some stones sunk about its roots and gravel on the surface. It had frequent supplies of water in spring and summer, but it did not flower, and was eventually lost.—S. ARNOTT.

FORTHCOMING EVENTS.

February 28.—Royal Botanic Society's Meeting.
March 2.—Société Française d'Horticulture de Londres Meeting.

THE ROSE GARDEN.

THE ART OF PRUNING ROSES.

THE correct and judicious pruning of Roses is one of the main points in their culture. However well we may have cultivated them, irreparable harm is too frequently done by a wrong use of the knife. With the vast difference in habit and characteristics they now possess it is quite impossible to give any hard-and-fast rules.

What is most astonishing is to find so many of our most showy decorative Roses still ruined by such reckless pruning as cutting off their strongest growths, generally because these had failed to bloom the same season as they were formed. It is difficult to persuade the unobservant grower that, as a general rule, the weak and puny growers should be cut back hard, and the extra vigorous varieties barely touched with the knife; but that is one of the most useful general rules I can give.

The fact is, these strong growers are carrying embryo flowers in almost every well-matured eye throughout their length; and bearing that fact

in mind, one can readily perceive the folly of removing it at such a stage of its existence. The really proper time for cutting into this class of Rose is during late summer, after the flowers have been realised, as they seldom do much upon the same rod later. This summer pruning takes away what will be of little future service, and at the same time encourages the crop of younger rods that will be so valuable the following season, by giving a larger amount of sap, and also more air and light in which to develop.

For example, to cut away the long rods and trails of such Roses as the *Crimson* and *Blush Ramblers*, the *wichuriana*s that partake of the well-known *Dorothy Perkins* type, also the strong trailing growths of the *Ayrshires*, is removing the most valuable part of their wood, and entirely losing the glorious effects these Roses give when their long growths are retained and those that had flowered removed. There is generally a good bit of thinning that can be done, especially the avoidance of crowded centres and indifferently-ripened wood.

The beautiful cascades of flower found upon *Dorothy Perkins* are not obtained if we do not

leave long, well-ripened growths of the previous year. And this applies to most of our strongest growers. Much more thinning out entirely would be advantageous. Instead of shortening these more than is needed to get rid of frost-bitten points, lessen their number outright rather than be overcrowded, always leaving the ripest rods in preference to longer ones that are not so well matured.

Coming to what I may perhaps be allowed to call normal growers, among the Hybrid Perpetuals, Teas and Hybrid Teas, a fairly safe rule can be laid down. The centres should be completely thinned out and any badly-placed shoot also removed. The rest need to be cut back about two-thirds of their length, but always to an eye facing outwards. Cut close to the basal eye, not leave some inches above this, which would only decay and frequently carry this decay much further down the shoot, simply because there had been no living cut to callus over in a clean and healthy

Folkestone, Papa Gontier, Marquis of Salisbury, Anna Olivier, Lady Roberts, Enchantress, General Schablikine, Maman Cochet, Mme. Falcot and Safrano, with those two charming decorative Roses Souvenir de Catherine Guillot and Souvenir de M. W. Robinson. A. P.

TREES AND SHRUBS.

GARDEN LILACS AND THEIR CULTIVATION.

FEW kinds of shrubs are more popular than the various kinds of Lilacs, for the flowers are at the same time delicately coloured, showy and deliciously fragrant. Added to this, they are within the reach of everyone who has a garden, for they are inexpensive, require no elaborate culture and, although partial to good

down suckers, which, even if frequently removed, tend to weaken the plant, while if neglected for a year or two they may easily ruin the variety.

The Best Soil and Manure.—When planted in good loamy soil, Lilacs keep vigorous for many years without feeding; but where the ground is inclined to be poor, it is a good plan to provide a surface-dressing of well-decayed farmyard manure each year. When the branches appear to be weakening, fresh vigour may be infused into the bushes by giving the plants a few applications of cow-manure-water during the period of growth. Premature weakening of Lilac bushes is sometimes brought about by allowing a lot of suckers to appear about the bases and centres of the plants. As a rule, little good can result from allowing such shoots to remain, even if the plants appear to be fairly vigorous; therefore it is a good plan to go over them annually and prune away any useless wood. The reduction of the

branches often results in more flowers and larger trusses, on account of the strength which has hitherto been spent on the production of useless wood going to build up the principal branches.

Lilacs for Forcing.—In addition to the value the various Lilacs possess for garden decoration, they are of great importance for forcing, and large quantities of Lilac blossom finds its way into our principal flower markets between Christmas and Easter. To provide this blossom special methods of culture are adopted for the plants. Owing to the expense attached to early forcing, it is necessary to ensure that the maximum number of flower-heads shall be obtained from the minimum amount of wood; therefore every branch a forcing plant carries ought to be a flowering branch. To obtain this result the appearance of the plant is sacrificed, and it may be seen as a gaunt, leggy specimen with a few leading shoots only. These shoots are, however, very strong, and they are furnished with vigorous flower-buds. This character is reached after two or three seasons' disbudding and pruning, for those few shoots only are allowed to grow, all other shoots being rubbed off while quite soft. Needless to say, no suckers are left to develop. Good, well-manured ground is necessary for the cultivation of these plants, and they are



ONE OF THE SWAMP HONEYSUCKLES (AZALEAS). (See page 93.)

improved by an occasional application of liquid manure during the growing season. During August each plant is chopped round with a spade to assist in ripening the branches, the root-pruning thus practised effectually checking any chance of late growth. Plants which have flowered are cut hard back and given two or three years' cultivation before they are again forced. Another method has been adopted of obtaining small plants for forcing in 6-inch or 7-inch pots. To do this the plants are dwarfed by grafting or budding them upon stocks of Oval-leaved Privet. Grown in this way they are short-lived, and rarely do duty for more than one or two seasons.

Propagation.—The varieties may be increased in several ways. When on their own roots, suckers may be detached from the parent stock and grown as separate plants, cuttings can be rooted, branches layered, or they may be grafted upon stocks of the common Lilac. The latter method of increase is not to be recommended when other ways suggest themselves, for it is difficult to keep

loamy soil, give satisfactory results in almost any kind of garden ground. The garden Lilacs owe their origin to two species, those with large inflorescences and flowers and strong, upright branches being most closely related to *Syringa vulgaris* (the common Lilac), and those with smaller inflorescences and flowers and less vigorous branches bearing a closer resemblance to the Persian Lilac (*S. persica*).

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Syringa persica is a comparatively dwarf-growing Lilac, for plants 5 feet high are less common than those a couple of feet lower. Shapely bushes

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are, however, formed, which provide innumerable flowering branches. The elegant panicles of lilac flowers are borne from both terminal and axillary buds with great freedom. It is one of the most fragrant of all Lilacs. A variety called *alba* bears white flowers, and *laciniata* has divided leaves.

S. vulgaris (the common Lilac) is well known to everybody by its large, upright heads of lilac flowers. By hybridising and selection a large number of varieties have been raised, which show a remarkable range of variation in colour and size of inflorescence. The trusses of some kinds are 9 inches long, and the colours range from white to red and from lilac to purple. Many double-flowered forms also exist; generally, the single-flowered kinds are more beautiful. That is, however, a matter for the taste of the planter to decide. The fragrance of some of the varieties is less delicious than that of the type, but there is little to complain of in the majority of them.

Good Single Varieties.—*Alba*, *alba grandiflora*, *Frau Bertha Damman*, *Marie Legraye* and *Mlle. Fernande Viger*, white; *Charles X.*, *Géant des Batailles*, *Philemon* and *Souvenir de Louis Spath*, red; *Duc de Orleans*, *Dr. Lindley*, *Mathieu de Dombasle*, *Delphine*, *Ville de Troyes* and *Aline Marqueris*, various shades of lilac.

Double Varieties.—*Marie Lemoine* and *Mme. Abel Chatenay*, white; *Alphonse Lavallée*, *Charles Joly*, *Dr. Masters*, *M.ument Carnot*, *Leon Simon*, *Mme. Jules Finger*, *rubella plena* and *Michael Buchner*, various shades of lilac. Some of the less fragrant are *Duc de Orleans*, *Ville de Troyes* and *Delphine*.

S. chinensis (the Rouen Lilac) is a hybrid between *S. vulgaris* and *S. persica*. Growing 15 feet or more in height, it possesses much of the grace of *S. persica* and is quite as floriferous. It is in every way worthy of inclusion among the best flowering shrubs.

HARDY AZALEAS.

THE value of the hardy Azalea in our gardens can scarcely be over-estimated. Three important points in good garden plants are possessed in no uncertain degree by the hardy Azaleas; namely, freedom of flowering, good habit, and an infinite variety of colours, to which, in most instances, must be added fragrance. There are a considerable number of species, but only some six or seven have been used to any extent in the development of the hardy garden Azaleas. These are *A. mollis* and *A. sinensis*, from China and Japan; the Caucasian species, *A. flava* (*pontica*); and the North American species, *A. calendulacea*, *A. nudiflora*, *A. occidentalis* and the Swamp Honeysuckle, *A. viscosum*. The name of Ghent Azalea has been given to a large section of these hybrids, presumably because some of the first varieties

were raised at Ghent. The name is somewhat misapplied, however, for our British raisers can justly claim a considerable amount of the credit for the present-day race of garden Azaleas. Many beautiful varieties have been raised in the Knap Hill Nurseries, near Woking, and more recently the same nurseries have given us a late-flowering race, the result of crossing *A. mollis* and *A. occidentalis*.

For delicate colours and varied tints it is doubtful if the hardy Azaleas have any equal; certainly they are unsurpassed by any other hardy shrub. Varied shades of white, cream, yellow, orange, pink, rose, red, scarlet and crimson are all

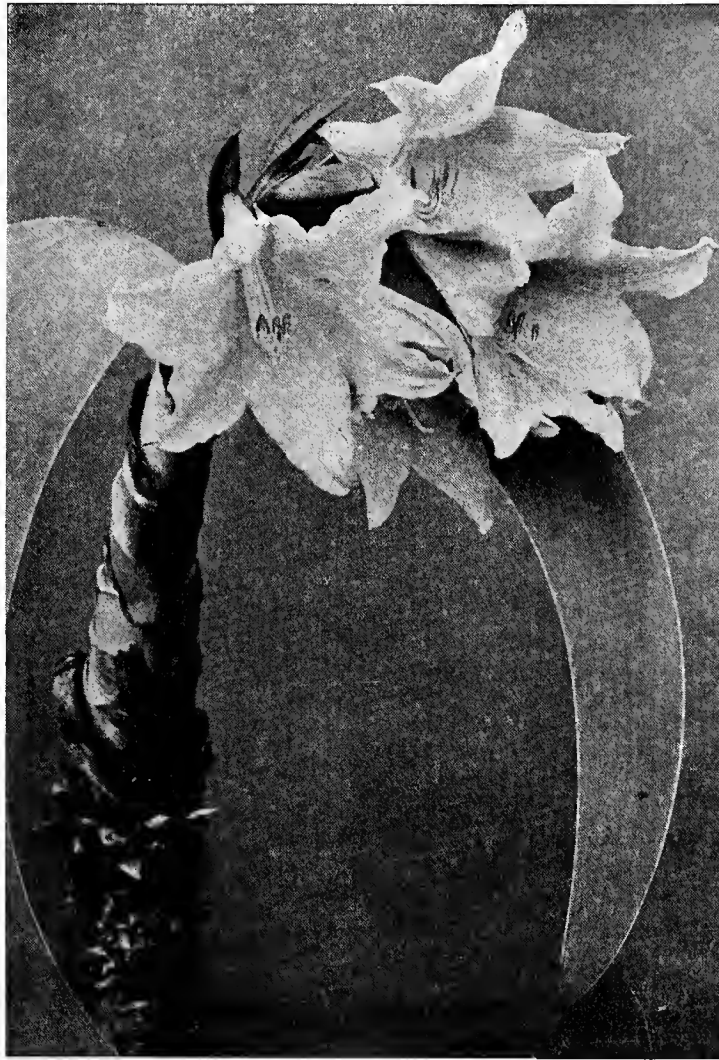
of seedlings is an interesting though somewhat lengthy procedure. Flowering plants can be purchased at a comparatively cheap rate, so that except as a hobby it is often preferable to buy plants.

A list of named varieties is unnecessary here; they may be easily found in a nurseryman's catalogue. In making a selection too many of the *mollis* section should not be planted, for though very rich in colour, the flowers possess little or no fragrance and, flowering towards the end of April and in early May, are soon spoilt by a late spring frost. The name Azalea has been dropped by botanists in favour of *Rhododendron*; but for garden purposes the popular name of Azalea is preferable and more descriptive of the plants concerned. A. O.

GREENHOUSE.

THE BLUE AMARYLLIS. (HIPPEASTRUM PROCERUM.)

OF the numerous species and hybrid *Hippeastrums* in cultivation, there are few more beautiful when in flower than *H. procerum*. It is, however, quite distinct from any other species, the most remarkable character being the large, long-necked bulb, which often measures 4 feet in length. In this respect it might easily be taken for a *Crinum*. A plant of this *Hippeastrum* is now flowering in the Mexican House at Kew; therefore visitors to the Gardens, especially lovers of these plants, should not fail to pay a visit to this house during the next few days. The plant is one of a dozen imported from Brazil last autumn. Of these, three very fine bulbs were planted in an open, loamy compost on the rockery at the south end of the house. The bulb of the plant illustrated is about 4 feet in length; from the centre rises an umbel consisting of five flowers of a delightful pale purple colour. Individually the flowers are from 6 inches to 7 inches long, by 5 inches in diameter across the tips of the segments. The leaves are sickle-shaped, from 2 feet to 3 feet long, and 2 inches broad, and these alone provide a most attractive feature of the plant. It is one of the most interesting of greenhouse bulbous plants at this season, and has already attracted the attention of many visitors to the gardens.



THE BLUE AMARYLLIS (HIPPEASTRUM PROCERUM), NOW IN FLOWER IN THE MEXICAN HOUSE, KEW. (MUCH REDUCED.)

represented. The flowering season extends from the end of April to July.

Azaleas may be planted in various parts of the garden proper, pleasure grounds and open woodland. Should the natural soil contain any appreciable quantity of lime, beds of peat, sandy loam and leaf-mould must be prepared for them. They may be readily propagated from cuttings of half-ripe growths inserted in pots of sandy peat during July and August. A larger percentage of successes in rooting usually results when the propagating-frame contains a little bottom-heat. The raising

H. procerum was introduced from South Brazil in 1863, and was first flowered in this country by Dr. Rayner of Uxbridge in 1870. On account of its shyness in blooming, it is not surprising that it is so little known. Other names by which the plant is known are *Amaryllis procera* and *A. Rayneri*. It is also commonly known as the blue Amaryllis, the name having been derived from the unusual colour of the flowers. W. T.

THE CAPE PRIMROSE AND ITS CULTIVATION.

DURING recent years a very great improvement has been effected in the *Streptocarpus*, or what is commonly called the Cape Primrose, and I venture to predict a much greater future for these intermediate or greenhouse flowering plants. When first introduced the colours were very few and poor, and the habit was anything but graceful, and, consequently, the plant was thought but very little of. Thanks to that enterprising firm, Messrs. Veitch and Sons of Chelsea, who have done so much to popularise and bring it before the general public, almost every shade of colour is now to be seen, the flowers are much enlarged, and the majority of the plants produce long foot-stalks, which render them extremely useful, not only as plants for the show-house, but for all kinds of house decoration when in a cut state. When suitably arranged they make delightful dinner-table decorations. The flowers remain in a fresh condition for a considerable time in a cut state.

When they receive proper cultivation, the plants are most floriferous, and will continue to flower for at least nine months out of the twelve. A common mistake is that they are treated too much like stove plants, and when such is the case the plants quickly become exhausted, have a weedy appearance, and the beautiful colouring of the flowers never attains perfection. For many years we have grown these plants at Aldenham in considerable numbers, and have attempted much in the way of hybridising, meeting with a good share of success. The principal aim I have had in view is to improve the constitution of the plant, the colouring and shape of the flowers, and last, but not least, the length of stem for cutting purposes. Many of the flowers of our varieties now, when well grown, attain a height of 9 inches to 12 inches above the foliage. Though these plants may be grown on for a number of years, I find the best results are obtained by renewing the stock every second year.

Seed-Sowing.—Seed should be sown at once in well-drained pots or pans in compost of a light, porous nature, which must be made moderately firm. The seed, which is very minute, ought to be handled most carefully, and scattered thinly and evenly over the surface. The smallest possible amount of very fine silver sand should then be dusted over it and the pots stood in a vessel of water up to their rims, so that every particle of soil becomes moistened. A sheet of glass should be placed over each pot, which ought to be stood in a shady part of a warm house in a temperature of about 60° to 65°. Very little water will be required till the seedlings make their appearance, but the soil should never be allowed to become dust dry, and extreme care should be exercised in applying the water. One need not be over-

anxious as to the germination of the seed, as this takes place very slowly. Immediately the young plants are discernible, the pots should be elevated on a shelf near the glass in the same temperature.

Pricking - Off Seedlings.—Immediately the young seedlings are sufficiently large to handle, they should be pricked off into shallow pans or boxes, which must be thoroughly drained, using a mixture of one part fibrous loam, one part peat, two parts well-decayed leaf-soil, and one part coarse silver sand. This should be made moderately firm and the young plants handled with great care. These may be placed and grown on in a temperature much the same as advised for raising the seed, but it is important that they should be shaded at all times from the direct rays of bright

near the glass as possible. Great care should be exercised in watering, and fire-heat should only be applied during very dull days and cold nights.

Established Plants.—After deciding on those that are to be retained, they should be placed in a cool house and given a season of rest, when they may be potted up and started into growth in a gentle heat during the month of February. The pots we find most suitable are 5-inch and 6-inch. Again, these should be well drained and the drainage made perfectly secure by placing good, clean fibre from the loam-heap over the same to prevent the soil mixing with it. For this potting use two parts fibrous loam, broken up into small pieces, one part peat and one part leaf-mould, well decayed. Add sufficient silver sand and finely-broken potsherds to ensure water passing through speedily. A little fine charcoal is also beneficial. Pot firmly and give the plants a good start in a warm house, after which they should be removed into a small span-roofed greenhouse, and, if possible, devote this entirely to them. Maintain a greenhouse temperature all through the summer months, and immediately the plants commence to flower, weak manure-water should be given at every alternate watering. Abundance of air should be admitted whenever the weather is favourable. The plants must never be syringed overhead, but during hot days the paths and stages should be kept constantly damped, and unless it is the intention to save seed, the old flower-stalks should be removed as they go past their best.

Propagation by leaves can also be successfully carried out in precisely the same way as practised with *Gloxinias*; but this is only to be recommended in the case of very choice varieties, as much better results are obtained from plants grown from seed.

EDWIN BECKETT.

Elstree, Herts.

ROCK AND WATER GARDEN.

THE HOOP-PETTICOAT DAFFODIL.

(*NARCISSUS BULBOCODIUM MONOPHYLLUS*.)



NARCISSUS BULBOCODIUM MONOPHYLLUS IN THE ROCK GARDEN.

sunshine; and, indeed, it will be well to mention here that at all periods of their growth shading must be applied during bright sunshine.

Potting-Off Young Plants.—By the middle of June the young plants should be sufficiently advanced for transferring to 3-inch pots, which must be thoroughly cleaned and well drained, using the same kind of compost as previously advised. Slight fumigations with XL All should be given frequently to keep in check the attacks of green fly, to which this plant is particularly susceptible. The best position for the plants after this period is a heated pit, standing the plants on a bed of finely-sifted cinder-ashes as

This charming little white Hoop-Petticoat Daffodil, sometimes known under the name of *Narcissus Clusii*, hails from the north of Africa, and comes into flower in our gardens very early in the New Year. Its leaves, as will be seen from the accompanying illustration, are grass-like and inconspicuous, while from their base rise, on slender stalks, the nodding pure white flowers. Coming at a time when we generally experience inclement weather, it is certainly advisable to give the plants a sheltered corner in the rock garden, and to place over the opening flowers a piece of glass to throw off the rain. The position also should be a very sunny one, where during the resting season the bulbs will be thoroughly ripened; at the same time, the

plants require ample moisture when about to flower. Almost pure sand is usually recommended as the most suitable soil for this plant, and, following these directions, I have been successful, as is depicted in the illustration.

As most of the bulbs are imported, and, I believe, actually taken up while their foliage is visible, it follows that the crop of flower is not usually very large the first year after planting. If given suitable conditions, however, they should become established and flower more freely in succeeding seasons. It is advisable to plant some dwarf, surface-rooting plant, such as *Arenaria balearica* or some of the small *Sedums*, over the place where the bulbs have been inserted, so as to clothe the soil and prevent dirt being splashed on the flowers. If glass protection is afforded them, it is surprising how long many of the blossoms will last. I noted one especially of the flowers in the group illustrated on page 94, and it was in good condition for nineteen days after opening. This in early January was very acceptable. One sometimes hears gardening acquaintances say that these winter-flowering plants are "not worth while," since they are so soon damaged, while the garden is usually not sufficiently attractive during the winter to induce them to visit it. Personally, I find one of the greatest charms of an alpine garden to lie in the fact that, no matter when one goes into it, there is always some little treasure just peeping out to welcome one. I readily grant that during the "dead" time of the year the amount of flower is small; but when it consists of such charming little visitors as the one under consideration, it appears to me almost sacrilege to even mention the words "not worth while."

REGINALD A. MALBY.

RAMONDIAS IN THE ROCK GARDEN.

RAMONDIAS belong to a Natural Order (*Gesneraceæ*) that is sparingly represented among hardy plants. Although the members of the genus are few in number, they, nevertheless, rank among the choicest and most distinct of rock plants. They are readily recognised at all seasons by the broad, expanded, rugose leaves, that rest close to the ground in the form of a rosette. In habit they are exceedingly neat, and, being evergreen, are not without interest even when out of flower.

The Best Situation.—Owing to the leaf arrangement there is always a danger, in level planting, of the centre of the plants becoming silted up with soil, which not only detracts from their appearance, but is also liable to cause decay to the plants; hence, in all practical planting, the best results invariably follow where they are given a more or less vertical position in any good wide joint between stones or rocks. Not only does this arrangement suit them culturally, but from a decorative aspect it increases their effect, and the leaves are always bright and clean. *Ramondias* love shade; hence they are ideal subjects for the north side of the rock garden or, indeed, any such position where they do not receive direct sun. Shady dry walls, for

example, claim no more charming subjects for their adornment than *Ramondias*.

The Best Soil.—They are not over-partial as to soil, provided it is of good depth and capable of supplying moisture even in the driest periods. I have had plants growing in soil composed chiefly of peat and loam, and, again, in soil that contained a large amount of chalk, and in each instance growth was vigorous and the plants flowered freely. The lasting qualities of the flowers were most in evidence when the plants received no direct sunshine. There are two species. *R. pyrenaica* produces purple violet flowers on stems some six inches in length, the flowering season being May and early June. Of this species there is a white-flowered variety, and when quite pure it is a charming and welcome addition, although the best form is rather rare. *R. serbica* is a later-introduced plant, the flowers being paler in colour,

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

THE Carnation is a plant of never-ceasing glory in these times. From the earliest to the latest days of the year it is not merely possible, but comparatively simple, to have beautiful blooms, provided, of course, that all the principal sections into which the plant is divided are well represented. The amateur, however, has usually to rest content with flowers in the summer months and some blooms from the *Marguerites* in the autumn.

Plants in Frames.—Although the Carnation is indisputably a perfectly hardy plant in its older varieties, it is equally certain that many of the modern sorts are weaker of constitution, and it is therefore deemed wise by many cultivators to



RAMONDIAS IN A SHADY ROCK GARDEN.

almost lavender, and having the petals more rounded at the points than those of *pyrenaica*. The variety *Nataliæ* is undoubtedly the prettiest of the genus, the colour being intermediate between *serbica* and *pyrenaica*.

Propagation.—*Ramondias* are propagated by division and seed. With the latter method strong flowering plants are obtained in the third year. Seed is sown as soon as ripe in well-drained pans, and the seedlings grown in a cool structure till the following spring, when they are transplanted into pans or boxes and grown in an unheated frame till such time as they are large enough for permanent planting. They also adapt themselves to pot or pan culture, and when grown to specimen size they are most desirable subjects to flower in the alpine-house in spring.

Coombe Court Gardens.

THOMAS SMITH.

keep at least a proportion of their stock in cold frames through the winter. In gardens which lie rather low, and where the soil is close, strong and cold, this system is wise; but where the conditions are more favourable, it is doubtful if the additional trouble thus involved is ever fully repaid. Provided that the plants are hardily grown by keeping the soil on the dry side and admitting as much air to the frame as possible, there will be little weakening; but when the plants are in the slightest degree coddled they suffer severely, and it is only when the utmost care is exercised that they move safely to the summer beds and borders. Now they will be decidedly on the move, and before another month has passed, or at latest by the end of March, the plants ought to be in their flowering quarters. To favour success, see that the lights are never closed; on the contrary, take them right off

whenever possible. More water will have to be given, as the roots will be reassuming activity, and they must receive gentle encouragement.

Plants in the Garden.—The young plants which were rooted from layers pegged down last July, severed from their parents as soon as they were ready and planted in their flowering positions, will be in splendid health if the sparrows have not managed to strip them entirely of leaves. At all times this bird is partial to the Carnation, and stout thread must be used to circumvent it. To admit air to the roots, the surface must be constantly open, but in pointing over it is important that the roots shall not be injured or disturbed. The mulching of manure that is often applied this month or in March will prove more beneficial if it is delayed until the middle or the end of April, when the roots are fully active and the plants demand food.

Sowing Seeds.—When one desires to perpetuate a particular variety, propagation must be done by layering; but raising plants from seeds is full of interest, and the most reputable merchants have now such splendid stocks that one is practically certain to secure a few varieties of conspicuous merit from each packet. And if this is not the case, the plants grow so magnificently and flower so freely that they are grand ornaments for the garden, and invaluable for the provision of armfuls of cut blooms. Those who have a greenhouse and a frame should sow seeds now, while those who have only the latter convenience will be wise to wait another month or so. In the former event the plants flower the same season, but in the latter the majority do not. Pans or boxes of light, sandy soil should be prepared, the surface made firm and level, and the seeds set 3 inches apart to obviate the necessity for thinning and to ensure sturdy progress from the start. The soil must be kept pleasantly moist, when the seedlings will soon appear. F. R.

THE JAPANESE IRIS.

(IRIS LÆVIGATA OR KÆMPFERI.)

As the planting season of this charming flower is at hand, perhaps these notes as to its cultivation will be welcomed by many readers who contemplate growing a few, and to others who

have not been successful with them. The chief requirements of these plants are a deep, rich rooting medium, which must be kept very wet from the time growth commences in spring until it begins to ripen in the early autumn; after then less moisture is required. The ideal situation is at the margin of a pond or stream, exposed to the full sunshine. Here the plants soon become established and increase very freely. Such situations, however, are not always available to the would-be

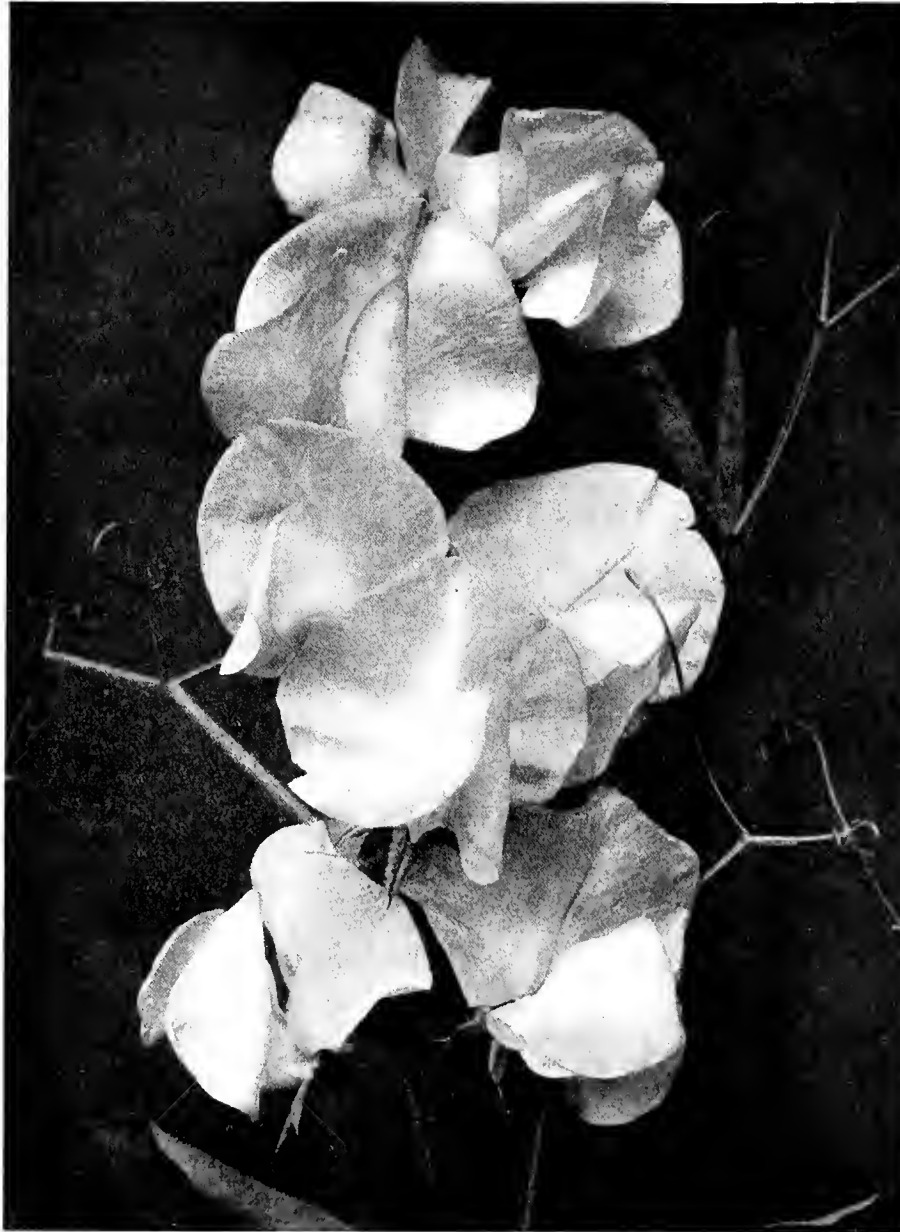
out, puddle the bottom with clay, and then fill up again with a compost consisting of good, rich loam to which has been added one-fourth of peat. If the loam is of an adhesive character, so much the better, as it will have the advantage of retaining the moisture better during the summer. Planting should be deferred until the soil has had time to thoroughly settle down; but if the roots arrive before the bed is ready for their reception, they should be potted and kept in a cold frame until

they commence to grow, when they may be transferred to their permanent quarters. As soon as growth starts in spring, and until they flower, the bed should be occasionally flooded to keep it in a semi-aquatic condition; but after the flowering period is over, less water is needed. During the winter I advise covering the bed with dry Bracken fronds to afford a slight protection; not that a few degrees of frost would injure the crowns, but during severe weather considerable damage is often done, the result of which is stunted growth and very few flowers during the next season. When this covering is removed in early spring, the bed should be top-dressed with some rich soil and leaf-mould. An occasional watering with liquid cow-manure is very beneficial when growth is commencing. There are such a number of named varieties that it is difficult to make a selection, but some beautiful flowers may be obtained from the mixed or unnamed varieties of these charming Japanese plants. A. M.

SWEET PEA MARJORY LINZEE.

When this Sweet Pea was first shown by Mr. C. W. Breadmore about three years ago it met with a very hearty reception, its delicate beauty appealing to all lovers of the Sweet Pea. Since then it has been grown in most gardens, and both for exhibition and garden decoration has

been very highly appreciated. Unfortunately, it is one of those varieties which have proved exceedingly difficult to fix, and it is seldom that a true strain can be obtained. Notwithstanding this, it is well worth growing, as a good percentage now come true, and these are, as already stated, very charming indeed. The colour is bright rose, slightly suffused with salmon, a combination of colours that gives quite a unique effect.



SWEET PEA MARJORY LINZEE, A BEAUTIFUL BRIGHT ROSE VARIETY FLUSHED WITH SALMON.

grower; but by selecting a spot which is naturally moist, but not heavily shaded, a suitable place can soon be made for them at very little expense.

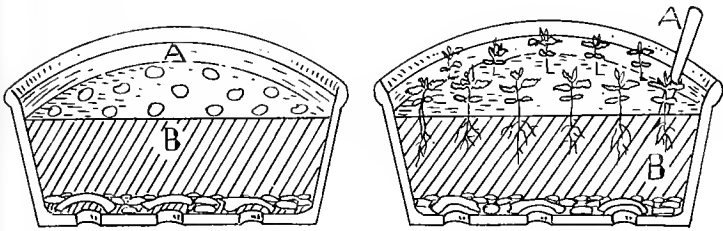
Having decided upon the size and shape that the bed is to be, take out all the soil to a depth of from 2 feet to 3 feet. If this soil is of a rich, loamy character, the greater part of it may be saved for making the new bed, but nothing but the best material should be used. When the bed is cleared

GARDENING FOR BEGINNERS.

TOPICAL NOTES ON TOMATO CULTURE.

An inexperienced amateur will be able to grow good crops of Tomatoes if he faithfully follows these simple instructions and carefully studies the illustrations.

Sowing Seeds.—Seeds should be sown thinly in shallow pans or in flower-pots. The soil must be made up of fibrous loam



HOW TO SOW SEEDS OF TOMATOES AND PRICK OFF THE SEEDLINGS.

and leaf-soil in equal proportions, with sand to ensure porosity. The soil should be in a medium state of moisture, then water will not be required before the seeds germinate. When it is needed, immerse the pan in a vessel of tepid water, and let the moisture soak the soil from the crocks to the surface. Do not cover the pan with glass or paper, as such coverings tend to weaken the seedlings. Place the pan in a warm corner of the greenhouse or heated frame, and when the seedlings appear, allow all the light and warmth possible to reach them.

Transplanting the Seedlings.—This work ought to be done while the seedlings are small, so that they may be kept sturdy. It is well to first transplant them 4 inches apart in pans or boxes, and then pot them singly in 3-inch pots. Loam two parts, leaf-soil one part, rotted manure and sand one part, form a good soil mixture. Make the soil firmer at each potting, so as to induce a short-jointed stem. A fairly high temperature and a dry atmosphere suit the plants best. A close, moist atmosphere is conducive to disease, and plants subjected to such do not fruit satisfactorily.

The Final Potting.—The soil for this potting must be coarser, but it should be well firmed. It is not necessary nor advisable to fill up the pots; space should be left for a surface-dressing of good loam and manure. Use 10-inch pots. When planted in borders, inside or outside, do not put in any manure, and make the soil very firm.

Watering and Feeding.—Sufficient water must be given to promote healthy growth; excessive watering is harmful. Feed the plants when two or three trusses of fruits have formed. Weak manure-water may be applied occasionally, but a teaspoonful of superphosphate given to each 10-inch pot once a fortnight and well watered in will do a lot of good.

Training.—Keep the plant to one main stem, and regularly remove all side shoots as soon as they appear; they grow from the axils of the leaves on the main stem.

Position.—Both inside and outside a south aspect is the best. If this is not available, select a south-east or south-west one.

The Illustrations Explained.—Fig. 1 shows, at A, seeds sown on the soil B in a pan. Cover lightly. Fig. 2 shows resultant seedlings being lifted by the aid of a pointed stick at A, so as to take out all roots from the soil B. Fig. 3 shows how to pot a young plant, and Fig. 4 how to finally pot a large plant. A, space left for top mulch. B, a turve placed under each pot, so that roots may enter it as denoted by the arrows. Fig. 5 shows the stage of growth when feeding may commence. Some trusses of fruits are formed. G. G.

ROSES IN LATE FEBRUARY.

PLANTING may yet be done, but, if dry, water frequently. The plants should also be hard pruned before

planting. Cut Tea Roses back to 3 inches or 4 inches or less. They are sure to grow well if the roots and growths are healthy. Pruning should be finished by the second week of March. In the North the third and fourth week will do. Prune all now except the Teas, Polyanthas, Noisettes and Chinas. After pruning, dig the land thinly. The best plan is to lightly prick it up with a fork. On no account dig deeply, for the feeding roots run close to the surface. If ground has been well prepared, avoid mulching beds with manure, as this mulch shuts out both sunshine and air. Mulchings are only beneficial during hot days when plants are growing fast, and a good loose blanket of earth is better than all the mulchings with manure. Dwarf stocks for budding should now be planted. Where the pegging-down system is adopted with vigorous-growing Roses, some of the ripest and longest growths should not be pruned. Do not, however, bend them down until April.

A FINE WINDOW PLANT.

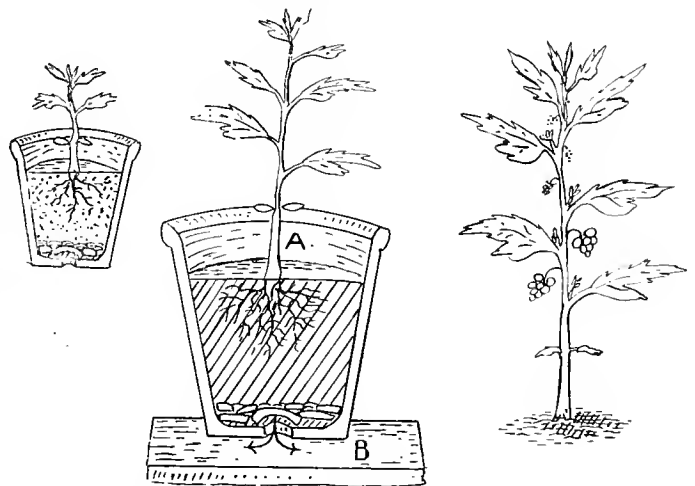
WELL-GROWN plants of *Calceolaria amplexicaulis* in pots grow to a height of about two feet; in 6½-inch pots young plants will grow to a height of 18 inches in one season and bear a great number of flowers. The chief difficulty in growing these plants in pots is experienced in the work of potting and getting the specimens established in the soil, as they sometimes die suddenly through stem decay. Young plants now growing in small pots must be repotted before they become too much pot-bound. If they are buried just the same depth again in the compost in the larger pot and very carefully attended to as regards watering, steady and healthy growth will

result. Young plants lifted from a bed of soil in a frame are more difficult to manage. On no account must they be potted deeper than when they were growing in the frame soil, and, after potting is done, return the plants to the frame, leaving them there for about twenty days, all the time watching them carefully so as to ventilate and give water at the right time.

These plants do remarkably well in windows facing the east, west and north-west. If the young plants are bushy, they may be allowed to grow and form branches naturally; but if now somewhat thin and spindly, pinch out the point of the main stem directly the plant is established after a repotting, and then side branches will result. Fibrous loam and leaf-soil in equal proportions, with a small quantity of rotted manure and some coarse sand, form a good compost. It is best to add rotted manure to the compost at first, and not feed the plants with liquid manure nor chemical fertilisers later on. AVON.

THE LABURNUMS.

PLANTED with discretion, the Laburnums produce delightful pictures in the garden. In spring and early summer, when the long, drooping racemes of *L. vulgare*, the common kind, are at their best, few small trees are more graceful. In addition to the perfect hardihood and accommodating nature of the Laburnums, there is scarcely a soil or position in which they will not grow satisfactorily. *L. alpinum*, known also as *Cytisus alpinus* (the Scotch Laburnum), is a fine tree for decorative planting. It flowers late, and is of great value for this reason; it grows 20 feet high. The variety *autumnalis* flowers, as its name indicates, in the autumn, and *Parksii* is another excellent form, with slender racemes of flowers often 1 foot long. *L. Adamii* is an interesting plant bearing dull purplish flowers. It is a remarkable graft-hybrid, obtained by shield-grafting *Cytisus purpureus* and *L. vulgare*. The strange thing about it is the complete reversion of some parts of the same tree to one or the other parents. It is said to have been raised by Jean Louis Adam in 1825.



POTTING ON AND PLANTING OUT TOMATOES.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Rose Garden.

Roses of the Tea section that were provided with temporary protection, such as hay or Bracken, during the severe weather should have this now removed and stored in the dry.

Pruning.—Roses of the climbing section may now be pruned. This consists chiefly of thinning out the growths where too crowded, retaining as far as possible strong young shoots and removing the older growths and weakly ones. Any supports that are not likely to remain firm during the coming season are better replaced with new ones before the growths are tied up into position.

Trees and Shrubs.

Complete the Planting as soon as possible and fork over between the shrubs. Allow the ground to remain exposed for a week or two, when it can be broken down and made neat and tidy.

Ampelopsis and Ornamental Vines.—These require pruning annually, otherwise growth is apt to become congested. Remove any weak, half-ripened shoots and, except where required for extension, prune much the same as recommended for fruiting canes.

Clematises.—The various sections of these require somewhat different treatment as regards pruning, according to the mode of flowering. *C. montana* and its variety *rubens* produce flowers from the previous year's growth, and require but little pruning. *C. Jackmanii* and varieties require the old growths laid in thinly for covering. *C. Flammula* needs but little pruning, except when encroaching upon other subjects.

The Flower Garden.

Spring Bedding in some localities has been affected by the frost, and *Myosotis* have suffered worst. Make good as soon as possible, firm the plants and aerate the soil.

Border Carnations should be examined and made firm at the base, and, as soon as the ground permits, use the Dutch hoe after a dusting of soot. Those wintered in cold frames should have all the air possible, and may be planted when convenient.

Montbretias.—Where it is customary to lift the corms of these annually—and on our heavy, cold soil we deem it advisable—these will shortly need replanting. Well work the soil and enrich it with manure and other decayed refuse of a light nature.

The Kitchen Garden.

Culinary Peas.—The earliest batch raised in pots or boxes as recommended for planting out must now be thoroughly hardened off preparatory to doing so. Remove the lights entirely whenever the weather permits. The same remarks apply also to Sweet Peas, especially those sown in autumn for the earliest supplies of flowers.

Spinach.—Make a sowing of this crop in a warm position in the garden. Sow in drills 1 foot apart, not too thickly. The Carter is an excellent variety, and so is Victoria.

Tomatoes.—A sowing of these may now be made in a gentle heat for producing the main crops of fruit. Within the next week or so sow seeds of a free-cropping variety for fruiting out of doors. The seeds may be sown thinly in pans or on the surface of fine soil in 6-inch pots. When germinated, elevate near to the glass, and always endeavour to promote a sturdy growth by admitting air to the structure when the weather permits.

The Fruit Garden.

Peach Trees.—Look carefully to the condition of these at the root. They should never be allowed to become dry. Fumigate with a mild application just before coming into flower to prevent the trees becoming infested with aphids. Those in late houses should have all the air possible.

Strawberries.—Introduce fresh batches of plants to cool quarters, and those starting away nicely may be subjected to more heat. Elevate near to the glass and pollinate the flowers artificially. Except while in flower, syringe the under-sides of the foliage especially with tepid water.

Raspberries.—If the old canes that bore the fruit last year have not been removed, do so at

once, cutting clean from the base. Whether grown singly to a stake or in rows—and I think the latter is preferable—last year's growths should be tied up. When the last-named method is adopted, two stout stakes are required, if only for a short row, and wires stretched between them; then the canes can be crossed diagonally.

Plants Under Glass.

Callas or Arum Lilies that are now throwing up their flower-spikes and are growing freely will need copious waterings, and will be greatly benefited by occasional doses of liquid manure-water.

Hippeastrums or Amaryllis.—Start a few of these, and, if possible, plunge the pots in a mild hotbed. If the bulbs were potted last year, a top-dressing only will be needed now.

Crotons.—The best method of increasing is by ringing, that is, selecting well-furnished growths and then twice cutting round the stem through the bark about a quarter of an inch apart and removing the soft layer. Bind up with some long moss, with which has been mixed a little silver sand, and keep syringed, when roots will soon be emitted.

Tree Carnations.—Pot off singly cuttings that have rooted, and grow on as sturdily as possible. The present is a good time for inserting a large batch for winter flowering. Those now blooming will be greatly benefited by a small sprinkling of Carnation manure on the surface after first loosening the soil. A snitable night temperature is 50°.

Half-Hardy Annuals.—There are many that should be sown without delay. Raise the seeds in a gentle heat in pans or boxes, and transfer when germinated to cooler quarters.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Greenhouse.

House Plants.—Wipe with a dry cloth the leaves of house plants when dusty.

Camellias in bloom must have abundance of moisture at the root.

Bouvardias.—Cut the roots into 1-inch lengths, insert in sandy compost and start in heat.

Cannas.—Shake out those wintered in pots, divide and repot, using a rather rich compost of rotted turf and Mushroom-bed refuse.

Double Begonias.—Remove tubers from pots. Arrange them on a layer of leaf-soil in wooden trays, keep moist until growth commences, then repot. Much heat is prejudicial, but a little at first is an advantage.

Fuchsias wintered in cutting-boxes should be transferred to 4-inch pots, using an open, highly-manured compost. Shake out old plants that have started slightly into growth, trim the roots and repot in pots of smaller dimensions.

Geraniums.—Autumn-struck plants wintered in boxes must now be placed singly in pots 4 inches or 5 inches in diameter, according to the variety and strength. Drain with rough leaf-mould or Coconut fibre refuse only to facilitate planting. Keep the plants rather close and, if possible, in a warm temperature for a few weeks, and always be cautious in the application of water.

Zonals for Winter.—Cuttings to provide plants to flower next winter are now ready. Select clean, not over-strong shoots and insert them singly in 2½-inch pots in a sandy compost. They strike root freely in a temperature of 55° to 60°, and should be repotted as soon as well rooted. The best of the plants that have been flowering during the winter, if repotted into 8-inch pots, are useful during summer for various purposes.

The Kitchen Garden.

Cucumbers.—Sow more to succeed the earliest batch.

French Beans.—Osborne's Forcing is a good sort. Sown in 6-inch-deep boxes, the seeds at 6 inches apart, they will provide nice pickings.

Seakale that was placed under a cover of cinders, sand or Coconut fibre will now be growing freely, and should be examined at brief intervals, cutting the more forward.

Onions.—Those who grow Onions from seeds sown out of doors should now prepare the ground by adding some well-rotted manure and pointing it into the surface; then firm the ground, draw shallow drills at 12 inches apart and sow the seeds thinly. After filling in, rake the surface.

Globe Artichokes.—Dig deeply between the plants after cleaning decaying material from about them. They appreciate very heavy dressings of cow-manure, but in soils of a retentive nature any kind of light material, such as leaves, litter, &c., may be dug in, with the best results. The planting of new plantations may be left till a few weeks later.

Jerusalem Artichokes.—Delay no longer the planting of these. No vegetable exhausts the soil of manure so thoroughly as these, and therefore a 6-inch layer should be incorporated with the soil well below the tubers, which should be placed 6 inches below the surface. Double rows at 15 inches apart, alternating with 4-foot spaces, give ample room.

Mushrooms.—If space in the Mushroom-house is exhausted, a bed may be made up in an open shed, either on the flat or ridged. It is important to keep a covering of dry straw constantly over the bed from the time it is spawned and earthed, in order to retain heat and preserve the surface moist without having to apply water.

The Flower Garden.

Violas.—Plant out well-rooted Violas in manured ground, making it quite firm to encourage bloom.

Double Daisies.—Gronps of double Daisies not broken up in autumn should now be seen to, dividing them singly and replanting a few inches apart.

Sweet Peas.—Well-established Sweet Peas in pots should have all the air possible, putting the sashes over them only when raining, in time of frost, or to shelter from cold winds. Each plant should be tied to a slight stick.

Gladiolus.—Last year furnished quantities of seed, which should now be sown in boxes and started in a mild heat, the soil to be kept moist always. Subsequent to germination grow the plants rather coolly and transplant into the garden in May, where they will form moderate-sized corms. The bulbets of old corms may be treated in the same way.

Eremurus.—Beds of seedlings should be cleaned of weeds now that all the plants are pushing up, and about half an inch of rotted compost laid nicely over all. Where morning frosts are severe, a few Spruce branches placed over them will keep them snug.

The Fruit Garden.

Pears.—If it is proposed to regraft any Pears, now is the proper time. Instead of using the old-fashioned clay mixture to exclude air, substitute for it Mastic L'Homme Lefort, which is clean and easy to apply. I use a piece of flattened wood, wetted, as a spatula, and smooth it over the scion and stock with wetted fingers.

Peaches.—Those trained on walls must be pruned and renailed without delay. As far as possible lay in only young and well-ripened shoots and allow each plenty of space; 5 inches or 6 inches apart is none too much. The flowers expand early on warm south walls, and where they are protected by glass copings or other means, these should be got ready for use.

Morello Cherries.—These are generally trained on north walls and left to the last. They may be pruned and renailed any time from now, and, like Peaches, should have as much young wood as possible laid in, but a spur here and there need not be objected to. I grow several trees as standards, and these need to have the shoots thinned annually.

Outdoor Strawberries.—Young plantations may be made now or as soon as the ground is in a fit condition. For ordinary purposes and according to the variety, I plant in rows 3 feet apart, the plants 18 inches apart for rank growers, and 2½ feet in the rows and 1 foot apart for others. President is representative of the former and Vicomtesse H. de Thury of the latter. The plants can hardly be made too firm in the soil. Those planted in August or September last will probably need cleaning and afterwards made firm.

R. P. BROTHERSTON.

Tyninghame, Prestonkirk, N.B.

THE KITCHEN GARDEN.

HOW TO OBTAIN EARLY TURNIPS.

IN French gardening or intensive culture forced Turnips should find many patrons, as the small, sweet roots early in the spring are more appreciated than at any other period of the year. Few vegetables force more readily. At no time, however, must there be excess of heat, as this causes the plants to bolt prematurely, but there must be ample moisture and ventilation later on. I have always obtained the best results from a bed of leaves and litter covered with 6 inches to 9 inches of fibrous soil, and this enriched by decayed manure or quick-acting fertilisers. Seed sown in February will give nice, small, sweet roots in six weeks if given a little bottom-heat, and two or three weeks longer in ordinary cold frames.

At the start there must be ventilation day and night to allow rank steam to escape, and sowing should be deferred till the heating materials are cooling down—under 80°.

Varieties are not numerous. Carter's Early Long Forcing is an ideal root, and may be had fit for table under two months. Sutton's White Gem is also a splendid forcing Turnip, and either for frames or early borders in the open it is the most precocious root grown; unlike the round roots, it does not bolt rapidly, and is of splendid quality. I have sown this in the open protected with litter, and obtained good roots in two months. The older Early Milan type is likewise very early; this has a flattish root. There is also a red Milan, but the quality is inferior to the long roots. For succession there is no variety that can equal Snowball. This is excellent and more solid than other early sorts, and for cold frames or early borders is splendid. G. WYTHES.

EARLY CROPS OF CUCUMBERS.

EARLY Cucumbers are always much appreciated, especially by amateur cultivators; but those who are unable to command a fairly high temperature by artificial means should not sow seeds too early, as Cucumber plants rapidly fail if subjected to a cool temperature in spring.

If plenty of heat is available, seeds may be sown at once in heated pits or houses, which are the best for the plants at this season. Where there are hot-water pipes under the bed, it will be well to place a layer of broken bricks on them and one of chopped turves prior to putting on the prepared compost. If the latter comes into direct contact with the pipes, it gets very dry at times, no matter how carefully the work of watering is done, and then the roots perish; this leads to a check of plant growth, lessens the number of fruits and impairs the quality, causing them to be extra bitter in taste.

Fibrous loam and sweet leaf-soil in equal proportions should be used to form the body of the compost, and to each bushel add an 8-inch potful of rotted manure. Put this compost in a layer 9 inches deep over the chopped turves. In the meantime sow the seeds singly in small pots in loam, leaf-soil and sand. Bury the seeds 1 inch deep and place the pots rim deep in sifted leaf-soil or Cocoanut fibre in a box. If the box is placed in a warm position, light but free from cold draughts, young plants will be available for the beds in fourteen days.

Put out the plants 3 feet apart, train to stakes and to roof wires in the houses, and on the surface

of the bed in heated pits. When the main stem has grown 3 feet long, pinch out the extreme point, and thus cause side shoots to grow, which must, in due course, be stopped beyond each cluster of fruits which show.

Surface-dress with a thin coating of rich loam and manure directly the roots show, and repeat the dressing in due course, feeding also in the meantime. A temperature of 68° at night and 10° higher in the daytime will be suitable.

In frames on hotbeds it will be quite soon enough to make up the hotbeds about the middle of March. Make the bed 18 inches wider each way than the frame which is to be placed on it. Mix some tree leaves with the littery manure, if available, and make the bed nearly four feet high, putting on the material loosely. The frame, compost, and heating of the material will cause the bed to sink down to half the height it was when first built. A similar compost and other treatment regarding the watering, top-dressing and feeding, as recommended in the case of plants grown in heated houses, may be the rule in the case of plants in frames. It is, however, advisable to leave a small opening at the top of the lights night and day to let out rank gases, and to cover with mats at night. B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

PINK BEDDING GERANIUM (E. A.).—A particularly good pink-flowered bedding Geranium is Beckwith's Pink, known also as Mrs. Robert Hayes. This and other bedding varieties can be obtained cheaply from Messrs. H. Cannell and Sons, Swanley, Kent.

PEGGING DOWN SWEET PEAS (K. E.).—Let us at once say that the very thought of pegging down Sweet Peas does not commend itself, and we do not think for one moment that anyone who adopted the system would be satisfied with the results. To peg down the strong shoots of Roses is one thing; to peg down the comparatively weak growth of Sweet Peas is another thing. The shoots would become a more or less tangled mass, whence would spring the blooms on short stalks, except in such positions as the light pulled them up, and even then they would be neither long nor strong. To your questions numbered respectively 1, 2 and 4, the answers are in the negative; to No. 3, the grass would not prejudice the Sweet Peas, but the Sweet Peas would prejudice the grass. If you decide to try the experiment, will you be so kind as to send a report of the result achieved to the Editor?

SUMMER BEDDING (L. C.).—You do not say if you have any plants whatever that might be used for furnishing your flower-beds, as, if you have, some may possibly be utilised for the purpose. The position of the beds and their arrangement is also a very important matter, and it appears to us that if the odd bed in the seven occupies the most central position, it might be planted with taller and more imposing subjects, and thus form, as it were, the *pièce de résistance*. From this the six other beds may be planted in pairs, those furthest from the centre being occupied by the shortest plants. Pelargoniums, tuberous Begonias and Lantanas are all, we believe, rabbit-proof, and the beds might well be planted with these. We saw last year some very effective beds in a particularly hot and dry situation. They were simply sown with the best varieties of *Eschscholzia californica* and Marigolds. We do not, however, think these plants are rabbit-proof. No doubt the excessively hot and dry

weather experienced last summer and early autumn caused the death of your Forget-me-not plants.

ANNUALS FOR BORDER (T. M. C.).—It is unfortunate that you give us no idea of the size of the border, upon which so much hangs. Any of the following are good and serviceable for freedom of flowering and decorative effect. Those marked by an asterisk trans-plant quite well: the remainder would be better sown in their permanent places in early March and attended to later in the matter of thinning. *Asters of all sections, though preferably such as Comet, Ray, Ostrich Plume and Victoria, all of which may be had in rose, pink, violet, white and other shades; *Ten-week Stocks, Marigold Orange King, *Godetias of sorts, Nigella Miss Jekyll, Poppies in variety, Mignonette, Candy-tuffs, *Liatris rubra*, *Gaillardia, *pieta* Lorenziana, *Eschscholzia Carmine King*, **Dianthus Heddevisii* in variety, **Chrysanthemum carinatum* and **C. coronarium* (both in variety), Sweet Sultan, Calliopsis, Dwarf or Tom Thumb Nasturtiums, **Phlox Drummondii* and *Nemophila insignis*.

PLANTS FOR BEDS (M. J. McC.).—Seeing that you desire the beds to be gay in May and June, we think you would best secure the object in view by planting for another year at least an arrangement of Cottage and Darwin Tulips, both of which, by reason of their tall habit and stately bearing, would be fitting associates for the other plants named. These plants, however, would only carry the season of flowering into the middle or end of May, unless you took the precautionary step of cold storage or something akin and planted a second batch of the Tulips at the end of the year or even early in January. In conjunction with the Tulips you might arrange *Lilium umbellatum* and other kinds to afford the requisite succession of flowers. Were it an ordinary position, we would suggest Azalea mollis, with Daffodils, Tulips and Lilies; but we fear the heat would be too much for some of these. As you have the Lilies in position, you might for this year try a mixture of *Iris pallida*, *I. Dr. Bernice*, *L. Mme. Chereau* and *L. Queen of May*, interspersed by good-sized plants of the long-spurred Columbine, which are at all times very pretty and effective.

PLANTS FAILING (L. M. J. M.).—Roses generally with fair treatment do remarkably well, but when such a vigorous sort as *Gloire de Dijon* fails, we conclude at once that the cause is lack of cultivation. For the wall and aspect you mention there is no finer plant than *Wistaria sinensis*, though we feel sure that several of the *Ceanothus* would do uncommonly well and require less attention than the *Wistaria*. One good, well-trained and well-flowered plant of this latter would, however, become a feature, provided always that well-established plants have been secured and that the planting was well done. For such a soil as is usual in your district, the addition of sand, leaf-mould, burnt earth and manure and deep cultivation are essential, and, given these, we should have little fear of failure. The four years of struggle and failure are the best proof that drastic treatment is necessary, though just what is needed can only be determined on the spot. Until the present crop of snails and slugs is reduced to reasonable numbers or eradicated altogether, there is little good in attempting the cultivation of alpine and rock plants. Snails may soon be reduced by hand picking, while thousands of slugs may be cleared off by the use of some of the soil fumigants now in vogue. We commend these to your notice.

TYPES OF CARNATIONS (T. S. B.).—You ask us to define the different types of these flowers and give their several treatments. We propose dealing with the former now, and a little later the latter, which will also be of interest generally. The perpetual types are those which, having produced flowering stems, also produce lateral shoots or growths, and these proceeding to a flowerier, perpetuate the plants, as it were; hence the name. This type has also been called "Tree" because of the ascending character of the growth. Border Carnations, on the other hand, while being somewhat hardier, produce all their shoots in a more or less procumbent manner on the ground, and produce a solitary flowering each year. The *Malmaisons* are big-flowered, broad-leaved forms of these latter, and probably descended from them as a seed sport or something akin. They are generally less hardy than border varieties, and require greenhouse treatment throughout. The *Malmaisons* only give one flowering each year, though where many sorts are grown and large numbers forced, it is possible to obtain flowers over a prolonged season. The result of potting border Carnations in spring and discouraging their flowering would simply make of them larger plants, and, grown under glass, might cause them to flower earlier the following year. It would not, however, make them winter flowering.

WALL GARDENING (E. M. B.).—There are quite a number of plants adapted to this phase of gardening, and plants that are suited to sun or shade. Unfortunately, you tell us nothing about the wall, its extent, height, construction and, most important of all, what provision in the shape of soil has been made for the plants. These, indeed, are the things that tell, any selection of plants by comparison being of secondary importance. It is important, also, to know whether the wall is an old, well-built one, which it is desired to adapt to the above-named circumstances, or whether it has been erected specially for the purpose in view. Generally speaking, the former is not good by reason of its dryness, its solidity and the few opportunities that present themselves for plant-growth. The purpose-made wall is another and much simpler thing, and such an one is readily decorated and furnished with plant-life. However, we give you a list of plants, together with some general hints, and if these do not meet your views, please write us again with fuller details: *Achillea umbellata*, *A. Clavenne*, *A. Huterii*, *Ethionema* of sorts, *Alyssum saxatile*, *A. montanum*, any of the

Aubrietias, the best of all plants for the purpose; Dianthus deltoideus, D. casius, Campanula muralis, C. garganica, Corydalis lutea, Aquilegia, Honesty, Armeria alpina, Iberis sempervirens, Edelweiss, Zauschneria, Encrusted Saxifragas in variety, and many more. The better way of introducing plants into a wall already built is by small pieces, which, if arranged in colonies, give a fine display. Seeds, too, are also valuable, and these should be first mixed with a little soil.

NYPHÆA MRS. RICHMOND (A. E. P.).—Yes; this will grow quite well in a tank out of doors if given the same treatment as other outdoor varieties. If you order it from any nurseryman who supplies other kinds of Nymphæas, he would obtain it for you if he does not already stock it.

LEUCOPHYTA BROWNII (Mrs. H.).—Leucophyta or Leucophyton Brownii, which is also known as Calceophalus Brownii, is grown by most nurserymen who make a speciality of the better class of bedding plants. It is quoted as plants in the catalogue of Messrs. Cannell and Sons of Swanley, and may also be obtained from Messrs. Veitch of Chelsea. It is sometimes pegged down as an edging when it is but a few inches high, but as dot plants it may be seen from 1 foot to 3 feet in height. The intense silvery whiteness of the entire plant is most noticeable.

INJURY TO SWEET WILLIAMS (L. A.).—The Sweet Williams sent show no sign of having been attacked by a fungus, but rather of having been nibbled at the base of the stem. It is possible that they are "damping off" through being too close together or too sappy when the cold, damp weather caught them, but the specimen is too small for us to be able to say. We suggest that search should be made for the caterpillars called "surface grubs." These are fat caterpillars which are much the colour of the soil, in which they bury themselves during the day and in cold weather and feed on plants, biting them near the surface as the specimens sent seem to have been bitten.

SHRUBS AND BULBS (Mrs. F. U. T.).—The best flowering evergreen you can obtain for the position you mention is Berberis stenophylla. Any nurseryman would supply it. Do not, however, obtain large plants, for large specimens do not re-establish well after root disturbance. Plants 2 feet high are quite large enough for permanent planting, and we should advise you to plant a triangle of three if you wish to fill your corner quickly. It will stand both the heat and drought as well as anything you could find. With regard to the second border, where you have spring bulbs, we should advise you to plant it with mixed varieties of Pentstemon for the summer. These are showy and possess a long flowering period. A mulch of well-rotted manure and decayed leaves would assist in keeping the ground moist. With regard to the other border, patches of Tritoma crocosmaeflora and T. Pottii, with some of the garden varieties, Snapdragon and Aster Amellus bessarabicus, would be likely to give the desired results. These would flower during August and September.

CAMPANULA MOERHEIMII (M. G.).—This and all the varieties of C. persicifolia delight in a moderately rich and deeply-cultivated soil and a position of some coolness, or where the supplies of moisture to the roots of the plants are fairly regular. This tribe of the Bellflower family quickly becomes infested by thrips when planted in dry soils and hot situations. Try the plants in a rich, light soil in a uniformly cool spot. The best time to transplant the Iris would be about mid-March, breaking up the clumps into moderate-sized examples and taking care when replanting not to bury the rhizomes or rootstocks. These should be kept quite near the surface. The soil should be light, freely mingled with old lime rubble, and the planting must be very firmly done. Arrange the plants quite near the wall, separating them by 6 inches or so, and fix small blocks of stone between them to wedge them tightly into their places. From your description we think it probable that the Lavender requires replanting and fresh soil. This plant is greatly benefited at times by the addition of lime or chalk to the soil, or, failing these, the bed might receive a good dressing of old mortar rubbish. In all probability, were you to dig up the plants, thoroughly trench the soil and freely incorporate some lime therewith, working the soil a few times and replanting in April moderate-sized divisions from your present plants, you would find a great improvement. We note the position is of some dryness, the extremes of which should be modified by occasional watering.

TREES AND SHRUBS.

MAGNOLIA GRANDIFLORA (Dr. J. W. S.).—We cannot detect any fungoid disease on the leaves of Magnolia grandiflora sent for examination, but we suspect that the diseased condition has been brought about by root disturbance. Magnolias as a whole, and the evergreen kinds in particular, are very impatient of root injury, and often suffer after transplanting if the work is not done very carefully and at the proper season. You could not have selected a worse time for planting your specimen, for in midwinter the ground is wet and cold, and a considerable space of time elapses before new rootlets can be formed. The most satisfactory results are obtained by transplanting M. grandiflora during the latter part of April or early part of May. Following this period early September is the most suitable. It is necessary to take great care with the roots, so that they are subjected to as little injury as possible; also keep the surface roots near the surface of the soil, and mix a little peat among the soil round about the roots to encourage the formation of new rootlets.

ROSE GARDEN.

PLANTING NEW BEDS OF ROSES (W. L.).—The varieties you have mentioned are all good; but instead of Lady Battersea we would suggest Laurent Carle, and instead of Liberty or Richmond, General Macarthur would better match Mme. Ravary and Lyon in growth.

PRUNING ROSES THE FIRST SEASON AFTER PLANTING (Regular Reader).—Taking the Hybrid Perpetuals first, the moderate growers you can prune back to within 3 inches or 4 inches of the base of the plants, which would leave about four eyes. The varieties coming under this heading would be Nos. 1, 4, 5, 8, 9, 10, 11, 14, 16, 18, 19, 21, 22, 24 and 26. The remainder would be considered strong, and should be pruned back to within 8 inches or 10 inches of their base. If you desire to grow any of them as pillar Roses, such as Nos. 6, 13, 17 and 25, leave their growths some eighteen inches in length or even more. Of the Hybrid Teas cut back the weak growers to 2 inches or 3 inches or two or three eyes. They would be Nos. 12, 16, 17, 32, 43, 49 and 52. Prune the strong growers to within 8 inches or 10 inches of their base. They would be Nos. 5, 6, 33, 50 and 54. All the others would come under the moderate group, and may be pruned back to within 3 inches or 4 inches of their base this their first year. There would be a difference in pruning the second year.

ABOUT ROSES (C. L. C.).—Such a book as you portray would be a great boon to the amateur; but many Roses vary so much in certain localities that the information given could not possibly be accepted by everyone. For instance, you allude to the variety Corallina as being a thing of beauty grown as a standard, and only fit for the rubbish-heap when grown on its own roots, by which we presume you mean as a bush. Now, we have seen this Rose grown as a low hedge, a perfect picture and a real pleasure to behold; but it was in the autumn. It is useless in the summer, and will not bear comparison then with other beauties of the Rose garden. You say you have had to worry out certain knowledge for yourself. After all, this is really the best aid to successful Rose culture, and we would advise you to carry it out more extensively. We think if you followed up the Rose articles in THE GARDEN you would obtain much useful help. For instance, it has frequently been stated that Crimson Rambler should be grown in the open and not against walls or fences; but as to advising that this Rose should be planted "in a draught" seems to us to be ludicrous, because it is an experience totally different to that of the majority of individuals. If you were to visit many of our large gardens, you would find this Rose revelling in the open, away from draughts, and you would see it clambering over tree stumps in wildest luxuriance. You imply want of success in growing Maman Cochet. Have you tried this Rose as a wall climber? We have seen it doing splendidly thus grown, and if in a soil not too rich, its blooms are much superior. We hope some day that such a book as you desire may be forthcoming; but, obviously, it would need to be frequently revised, as our collection of Roses is being so rapidly augmented, and well-known varieties are being annually superseded.

THE GREENHOUSE.

BOUGAINVILLEA AND APHIDES (M. T.).—Bougainvillea glabra is not particularly liable to be attacked by aphides, and you should have no difficulty in keeping it free from these pests. An occasional fumigating with the XI. All Vaporiser will keep these pests completely in check.

AZALEAS AND PRIMULAS (J. D. N.).—After this lapse of time your Azaleas will, no doubt, need repotting. In carrying this out, all the mossy soil should be removed from the surface and the old ball of earth loosened with a pointed stick. You will, however, find full instructions on potting Azaleas in "Gardening for Beginners" in the issue of THE GARDEN for February 17. The white root-like objects that have come up are, in all probability, fungi from a piece of decaying wood. When a plant is grafted, the graft is held in position by a stake, and this in time decays and snaps off at the base, leaving a portion of the decayed part in the ball of earth. We have had in our collection many instances of a small white fungus coming up in this way; but if removed it will not harm the plant. The fact that the leaves rot and the stems push out roots above the ground point at once to the fact that your plants of Primula kewensis are being kept in too cold and damp a structure. You say nothing whatever as to this. In order to have it at its best, Primula kewensis needs a structure kept at a minimum temperature of 45°, running up 10° to 15° during the day, with, at the same time, a light, buoyant atmosphere.

CULTURE OF A SOUTH AFRICAN PLANT (H. B.).—The name of the flower sent is Ornithogalum thyrsoides. It is quite an old plant, but was very little known in this country prior to the Boer War, at which time large quantities of bulbs were sent home. The bulbs which you have should be potted at once. Very large bulbs may be put singly into pots 5 inches in diameter; but generally three bulbs can be accommodated in a pot of that size. The pots should be clean and effectually drained, and the bulb potted at such a depth that there is half an inch of soil above the top portion of the bulb. A soil consisting of two-thirds good yellow loam and one-third of peat or leaf-mould, with a liberal sprinkling of silver sand, will suit this Ornithogalum well. After being potted, the bulbs should be placed in the greenhouse and given just enough water to keep the soil slightly moist till there are signs of growth recommencing. When this takes place, more water must be given. Yours will probably soon develop flower-spikes, and after these are past water

should be given as before till the leaves show signs of going to rest, when less moisture will be required. When quite dormant, they may be kept dry. If the roots are in good condition, these Ornithogalums will not need annual repotting, but they must be watered when they are ready to start into growth.

GERANIUMS FOR WINTER FLOWERING (F. E. E.).—The best way is to propagate cuttings now, grow them on sturdily in cold frames all the summer, pinching off all flower-stalks at once as they appear, and in September or early October remove them to a warm, airy house, when they will bloom all through the winter. Fifty degrees is quite high enough temperature for them.

PRIMULA OBCONICA (J. McD.).—We suspect your Primulas have been allowed to become too dry on one or two occasions. The spotting of the leaves is certainly due to some atmospheric or cultural trouble, not to any insect or fungus attack, though there is some evidence that a few red spiders have attacked the foliage here and there. Perhaps a little more holding compost would have been preferable.

DIOSMA LEAVES (St. J.).—The leaves of Diosma are badly attacked by scale, which is, in any case, difficult to eradicate, but more particularly so in a plant with such small leaves as this. The best thing you can do is to make a very strong solution of soft soap and water; then lay the plant on its side and give a good syringing with the mixture. After a couple of hours, syringe with clean, tepid water, and repeat the operation in a couple of days till the pests are killed.

HYDRANGEAS TO POT (H. I.).—We hope the hard frost has not hurt your plants. Repot as soon as possible and place in a cool house in a shady position until new growth begins. Then put them in a sunny position in the house, give air freely, and as soon as the flower-buds are plumping give weak manure-water occasionally. We are glad to hear that you have found THE GARDEN so helpful in the past, and trust you will find it even more so in the future.

GREENHOUSE PLANTS (F. M. G.).—Judging by the leaves sent, the greenhouse has been kept much too close and damp, the leaves produced under these conditions being so soft in texture that they commence to decay, and thus furnish a direct foothold for the fungus to establish itself. There is certainly plenty of fungus present, but it is, we think, the effect rather than the cause of the trouble. With the lengthening days we shall get more sunshine, and it will be possible to give an increased amount of air to the greenhouse. This will lead to firmer growth, and then we do not think you will be further troubled in the way you have been. Any diseased leaves should be picked off and burnt.

STOPPING CHRYSANTHEMUMS (C. D., Suffolk).—The following varieties must be allowed to make natural breaks, and these will take place during May and the early part of June. The first-crown buds which show in August must be "taken." Mrs. A. T. Miller, J. E. Dunne, Reginald Vallis, Godfrey's King, Miss E. Thirkell, A. J. Norris, Valerie Greenham, Mme. E. Roger, F. S. Vallis, C. Beckett, Lady M. Conyers, Dorothy Oliver, W. Duckham and F. R. Stephens. The other varieties treat as follows: Master David, stop April 20; Hon. Mrs. Lopes, April 10; Mme. R. Oberthur, May 10; Sir Frank Crisp, March 5, and again May 15; O. H. Broomhead, March 15, and again May 20; Lady Talbot, May 10; Rose Pockett, May 15; and Pockett's Crimson, May 1.

AMARYLLIS BULBS AFFECTED (J. H.).—The grubs sent from the bulbs of Amaryllis are those of the Narcissus fly (Merodon equestris). This pest appears lately to have acquired the habit of feeding on bulbs other than those of the Narcissus. The fly is rather like a hairy bee, but has two wings. It dies with a peculiarly darting movement, and emits a very shrill sound when flying. It appears generally in May, but is about until July. Bulbs attacked should be burned. If the attack is discovered early, the grubs may be picked out of the bulbs; but this is rarely possible in time to save them. Narcissus bulbs, when an attack is feared, should not be planted until late September, when the bulbs containing maggots may usually be picked out by their softness. This pest is now notifiable to the Board of Agriculture, and the Secretary of the Board should be informed of the occurrence.

BEGONIA GLOIRE DE LORRAINE (Miss C. H.).—Cuttings of the flowering stems are quite useless in the case of Begonia Gloire de Lorraine: for, even if the points are struck, flowering stems will always remain, and never form good bushy plants. In order to obtain cuttings, the plants should at this season be cut back to about six inches of the pot. Then they should be rested by being kept rather drier for two or three weeks, at the expiration of which time they must be placed in a temperature of 60° to 70°, and be occasionally bedewed over with the syringe during bright weather. In this way young, sturdy shoots will soon be pushed out, and when these are from one and a-half inches to two inches in length they form good cuttings, and soon root if put into sandy soil in a close propagating-case where there is a gentle bottom-heat. Throughout the summer the plants should have what is termed an intermediate temperature—that is to say, in very hot weather fire-heat may be dispensed with—but the structure must always be kept closer and moister than an ordinary greenhouse. In hot weather the plants are benefited by being syringed, but not in the winter. Old plants for the second year may be treated as for the production of cuttings, except that, when the new shoots are about half an inch in length, the plants may be shaken nearly clear of the old soil and be repotted in some fresh compost. After that a growing temperature of 60° to 70° will suit them well.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Mending Pergolas and Arches.—There is no time better than the present for mending pergolas, arches and similar structures. These have been exposed, it may be, for several years to the weather; and as the past few months have been exceptionally wet, the conditions created favoured the decay of the wood and the growth of fungus thereon. Furthermore, such plants as Roses are now free from leaves, and it is much easier to manipulate the branches when in that state than later when in full foliage.

Pruning House Climbers.—Where deciduous climbers are grown on dwelling-house walls, a close examination of them should be made now. The branches of nearly every kind look quite thinly disposed while in a leafless condition, but there is always the danger of them becoming overcrowded later on when in full growth. Few of such climbers can be then dealt with without causing unsightly gaps. Thin out the weakly shoots, some that cross others, and cut off the unripe ends of those retained. Tie or nail up any branches that require it, and deal similarly with the evergreen kinds.

An Early-Flowering Almond.—Prunus Amygdalus persicoides, a variety of the common Almond, is conspicuous by reason of its flowers opening a fortnight or so in advance of those of the type. Normally, they may be expected to open about the middle of March in the neighbourhood of London, but this year they were well advanced by the middle of February. There is little by which it may be distinguished from other forms of P. Amygdalus save by its early flowering, for in leaves and flowers they are much the same. By the inclusion of a tree or two among other Almonds the flowering period of the group may be extended, and any tree which blooms before the end of March is to be encouraged.

Buddleia Colvillei in Scotland.—As many people experience a difficulty in flowering the fine Buddleia Colvillei in Scotland, it may be mentioned that it has flowered for several years in the garden of Mr. W. D. Robinson-Douglas at Orchardton, Castle Douglas. It is grown there on a wall, and was several years in position before it bloomed. Its flowering appears to depend largely on the manner in which the young growths stand the winter, as it is on these that the flowers are borne. In the case of B. variabilis, the flowers come on the shoots of the same year, so that its being cut back does not matter. B. Colvillei has really handsome flowers, in long panicles of 1 foot or 18 inches in length, and of a delightful rose colour, with a white ring round the mouth of the corolla. The specimen at Orchardton is 10 feet or 12 feet high.

A Useful Greenhouse Begonia.—A charming effect is produced in the greenhouse at Kew at the present time by a large group of the Mexican Begonia manicata, and we cannot but wish that the plant found more general favour among people who are responsible for keeping greenhouses and conservatories gay at this time of the year. Belonging to the rhizomatous section of the genus, B. manicata is recognised by its large, handsome green foliage and upright, elegant panicles of pink flowers. On vigorous examples the inflorescences sometimes approach a height of 2½ feet, while those 1½ feet high are common. Arranged with foliage plants, or with Hippeastrums as at Kew, the effect is very pleasing.

Narcissus Seedlings.—What was probably one of the most interesting exhibits at the last meeting of the Royal Horticultural Society, to hardy flower-lovers at least, was the remarkable series of seedling Daffodils, the result of crossing the small-growing N. minimus and N. cyclamineus, the seedlings presenting to some extent characters intermediate between both parents. As shown, none of the plants had flowers quite so large as N. cyclamineus, and for the most part they shared the colour of the other parent, leaning also in the same direction for the greater width of the mouth of the trumpet. None of the seedlings, however, had the drooping flowers of N. cyclamineus or its erectly-poised reflexing segments, the whole of them having the more horizontally-disposed direction which characterises N. minimus. It is possible, however, that the plants may yet develop their characters more fully.

The Two-leaved Scilla.—A number of pretty effects have recently been noted by the combination of the pretty Scilla bifolia with Snowdrops and coloured-stemmed shrubs. It is particularly attractive when used as a carpet beneath white-stemmed Brambles, while with Snowdrops it comes in very nicely for clothing bare ground beneath a thin shrubbery. Such plants as these are peculiarly adapted for planting beneath shrubs, for they blossom early and finish their growth in time for the borders and beds to be cleaned up for May, when the majority of the shrubs are expected to be in bloom. Later-flowering bulbs, on the other hand, keep the ground untidy until midsummer, for it is not possible to clean it properly until the foliage has died down. Vigorous-growing bulbs, such as Narcissi, are also less well adapted for shrubbery work than these neater and dwarfer-growing sorts; therefore now that many of them are coming into flower, note should be made of those which are most likely to create a good display for another year. Unlike the Crocuses, the two-leaved Scilla and the Snowdrops do not succeed for many years when planted in grass; therefore there is all the more reason for their use in beds and shrubberies.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Lapageria in the Open.—"S. A." in THE GARDEN, issue February 17, page 78, advocates the planting of *Lapageria rosea* and *L. rosea alba* in the open where duly sheltered quarters are available. Some years ago, while on a visit to a large garden on the South Coast of Hampshire, the gardener pointed out a number of plants which had their branches trained to the south-west walls of the mansion. He had put them there three years previously in suitable soil, peat, loam and sand, and he told me that they were just getting established and forming flower-buds. They had withstood exposure to two ordinary winters without injury.—AVON.

What to Plant Beneath Trees.—I can very fully bear out all that is advanced on page 77 of the issue for February 17 in favour of the St. John's Wort as a suitable plant for growing under trees. I have found it do remarkably well in such positions in rather heavy soils, and also on a rather steep bank facing south within 200 yards of the sea. The soil in this instance was light and sandy and very poor, but the plants grew freely and flowered exceptionally well. Another good plant for growing under trees is the Periwinkle (*Vinca*). Its green, glossy leaves and blue and white flowers, respectively, are charming. It makes a fine carpet under Pines, where very few kinds of plants will grow.—B.

Varieties of Iris reticulata.—Some four or five years ago we had a spell of particularly warm sunny weather in late February and early March, and I noticed the bees very busy on my Irises, *reticulata*, *Krelagei*, *Danfordiæ* and several other allied varieties. I gathered a good quantity of seed that year, and the resulting plants, now mostly flowering for the first time, are making a most charming display in a large cold frame. They range through every shade of blue and purple, and there is one nearly white. Several of them are very fine, large, tall-growing plants, and many exhibit delightful contrasts of colour in the standards and falls. On going carefully through them to-day, I can scarcely find two alike, so great is the variety.—F. HERBERT CHAPMAN, Rye.

Horticultural Education for Women.—Demands in relation to horticultural education in all its numerous phases grow rapidly, and it is difficult for public or private authorities to keep pace with them. A gentleman in Surrey just recently enquired for a horticultural school, training institution, or practice garden to which he could send a young girl now in a secondary school in the county, and who earnestly desired to obtain good gardening instruction. Was there in Surrey no counterpart for girls to the school of gardening for young men at Wisley under the auspices of the Royal Horticultural Society? No, there was not, the Royal Horticultural Society not including females among its garden students. Why not send the girl to Swanley College? That was too expensive, was the reply. What is needed is a good advanced practice garden, organised in a central position by the County Education Authority, to which both lads and girls could be sent for a couple of years' training. If at the end of that time they did not manifest sufficient capacity, they would become failures. Practical gardening, even when conducted by females, is onerous, arduous and largely

menial. Still, it has all to be gone through and faced with spirit. It is later in life, if good use has been made of youth, that the reward is found.—A. D.

Cotoneaster horizontalis.—On page 78, issue February 17, "H. P." does not praise this lovely plant too much. If grown in a rockery with its branches flattened out against large boulders, the effect in autumn, when the leaves change colour, is very striking. I have lately seen plants trained against turf banks, and they looked very well indeed. A gravelly and peaty soil is suitable. If clayey, some peat and road scrapings, or similar material, must be added to lighten it.—SHAMROCK.

Hippeastrum (Amaryllis) procerum.—This *Hippeastrum*, so truthfully portrayed on page 93, issue February 24, is particularly interesting in the colour of its blossoms, while the large club-like bulb is very different from that of the other members of the genus. It does not appear to be at all amenable to cultivation, for though I have flowered it several times, it was only as freshly-imported plants, and the Kew specimen I see is the same. In my case it was necessary to grow the bulbs in pots, and it now remains to be seen whether, if planted out as at Kew, they will become permanently established. Widely distinct as it is in general appearance from the garden varieties of *Hippeastrum*, this species would appear to have other points of difference, for any attempts to cross it with other forms have, so far as I know, proved unsuccessful.—H. P.

Lilacs on their Own Roots.—As stated on page 92, February 24, it is not advisable to graft the garden varieties on to the common Lilac, as the suckers are almost certain to spring up afterwards. On this point I was particularly interested to learn, during a recent visit to a large Nursery that all the Lilacs there (and they have a fine collection of the very best) are on their own roots, having been raised from layers. What is more, the beds of layers, as can well be understood, covered a considerable space. The great advantage of plants of Lilac on their own roots is that there is no need to trouble about suckers, in the case of grafted plants, are a most unmitigated nuisance. When Lilacs are flowered under glass, the shoots then produced are not at all difficult to strike if they are placed in a close propagating-case and given much the same treatment as *Fuchsias*.—H. P.

A Garden Water-Course.—In THE GARDEN of February 17 Miss Jekyll names some useful and attractive plants that would add to the view of a water-course, pond or lake. No doubt there are many neglected gentle streams in gardens which might be made quite beautiful. The banks of a stream, especially those with a gentle slope to the water, are perhaps the most suitable places to be made attractive. There are a number of shrubby plants that seem to thrive in such partly-sheltered grounds, such as the *Viburnums*, *Laburnums*, *Lilacs*, *Rhododendrons*, *Azaleas*, the *Brooms* (white and yellow flowered), the *Snowberry* (a pleasing shrub covered with white berries in winter), the *Pernettias* (covered with pink berries in winter), *Laurustinus*, the *Berberis* (especially *Berberis stenophylla* and *B. Darwinii*), the wild and other single *Roses* and the *Honeysuckle*, with a few *Almond* trees for their early spring flowers. *Primroses*, *Hyacinths*, *Snowdrops* or other bulbs might be allowed to grow naturally under the shrubs. In the stream itself one or more pools may be

formed by banking up the stream with earth secured by rubble stone, which would also form a kind of waterfall. Such pools would allow the safe planting of many flowering water plants, such as the purple *Willow-herbs*, *Plantains*, *Ranunculus*, *Sagittaria*, *Villarsia*, *Lilies*, *Spiræas* and, in particular, that beautiful white fragrant plant, *Aponozeton distachyon*, better known as the *Water Hawthorn*. Though the latter plant is a native of South Africa, it flowers freely in British waters, but a little protection during winter is essential to its safety.—J. NEWTON, *Ashton-under-Lyne*.

A Collection of Snowdrops.—Miss Alice G. Bickham of Gorsefield, Bowdon, Cheshire, has a very extensive collection of Snowdrops, as a friend who knows her flowers informs me. Miss Bickham is an enthusiastic cultivator of the "harbinger of the infant year," and there are few known species and varieties which are not in her garden. Many of Mr. James Allen's raising and selection are at Gorsefield, and the species which have been imported, as well as the out-of-the-way varieties of our common Snowdrop, are there also. For example, Miss Bickham has, I am told, the rare double yellow one, while she has also some single yellow forms. I suppose "yellow marked" would be a truer definition of the flowers than "yellow," but they are very pretty. The quaint-looking *Galanthus Scharlokii* is also at Gorsefield, and the whole collection seems to be a splendid one.—A. M. D.

Why do Snowdrops Fail in Some Soils?—This is the question with which Mr. Arnott commences his interesting note in THE GARDEN of February 17, and in response to his suggestion that those who have studied the likes and dislikes of this charming but capricious little plant should give the result of their observations through the medium of THE GARDEN, I am sending this short note in the hope that it may perhaps save some failures and disappointments. First of all, we may take it as certain that Snowdrops do not like being moved, and that they suffer considerably from being lifted and dried. I have moved bulbs at different times of the year—in the early summer, when the foliage has died down, drying and replanting them in the ordinary way; I have lifted and replanted them in the autumn; and I have moved them in the spring, when in flower, with as little disturbance to the roots as possible, and those moved in the spring seemed to suffer least, no doubt because they were not subjected to the drying process. But those who have no Snowdrops in their gardens and want to have some must get bulbs lifted and dried in the ordinary way, and my advice to them is to procure the bulbs as early in the season as they can and plant them as soon as they arrive in some sheltered position where the soil is open, cool and well drained. If you have some woodland bank, sloping towards the north for preference, where the soil is favourable, you have an ideal spot for planting Snowdrops. They revel in such a place. The Snowdrop is modest and retiring in its habits, and is seldom found naturalised in the open, whereas it invariably looks happiest among the tangle of roots and low undergrowth with its covering of rich leaf-soil. Therefore, to sum up, endeavour to give them conditions as near those described as possible, and, at any rate, avoid planting in stiff, badly-drained soil. Leave them severely alone, both root and flower, when they are established.—W. A. WARRS.

Varieties of Crocus chrysanthus.—Two pretty little varieties of Crocus chrysanthus are always among the earliest of the Crocuses to bloom. These are fusco-tinctus and fusco-lineatus. The former is of a good yellow, tinged or flushed with brown on the exterior of the outer segments, and the latter is also yellow, but the brown colouring takes the form of lines, also on the outer segments. These flowers are small in size, but are very pretty and bright, while the earliness of their flowering renders them welcome in any garden. These Crocuses are inexpensive, and are as easily cultivated as any. They are admirable little flowers for the rock garden.—S. A.

A Well-Grown Saxifraga longifolia.—The rosette of the Saxifraga longifolia shown in the accompanying illustration had, after eight years' growth on the rockery, reached 12½ inches in diameter, when, alas! it showed signs of developing its inflorescence last summer. When fully developed, the main flower-stem measured 26 inches in length. It was a grand sight indeed, although I should have preferred to keep for a few years longer the imposing rosette which had for so long been the pride of the rockery. It is, I believe, rare to have a rosette of such dimensions, most of them flowering at a much younger age.—E. HEINRICH, Planegg, near Munich, Bavaria.

Hop Manure.—There are few matters in relation to gardening that give more concern to the small amateur, of whom there are myriads, than getting a proper supply of fibregiving manure. Such amateurs are told week after week to trench the ground deeply and to manure liberally. The trenching or digging they can get done; the purchase of plants or seeds gives little trouble if the pocket permits of it; but the liberal manuring baffles them, because the animal manures so strongly advised by writers, and too often just as though they fell like manna from the skies, are not obtainable at any price. Mineral or chemical manures they can purchase freely; but these at their best furnish no enduring fibre in the soil, and it is this material which gives such value to animal manures, especially to stable manures. Hence amateurs ask what is the best substitute for the animal matter, which is fast becoming so scarce, and they are told to use Hop Manure. That may be a good substitute for the absence of the strawy matter, especially if it were impregnated with strong manurial elements, as are animal manures. But is it so? What is the experience of amateurs who may have been users of it? One does not want trade eulogies, but the practical experience of those who, unable to obtain animal manures, have used Hop Manure. Presumably the material is identical with that we see carted away from breweries as spent Hops, out of which have been soaked and washed all those astringent properties which render Hops so useful in the manufacture of beer. If that is so, what is left other than mere fibre, which would, incorporated in the soil, slowly decompose? Does the Hop Manure sold by Wakeley's or by anyone else signify a compound of which the spent Hops form the body or basis, while the

plant or crop foods it may contain are added in the form of chemical or mineral elements?—A. D.

Carnation Britannia Under Glass.—In your review of my new book "Perpetual Carnations," which appeared on page xvi. of your issue for February 17, I notice you call attention to the fact that in one chapter I describe Britannia as one of the best varieties for bedding purposes, yet later on declare it to be wiser for winter flowering to grow this variety entirely under glass. I beg to point out that, however inconsistent this may at first appear, what I have said is precisely the case. For bedding-out in summer I doubt if Britannia can be excelled; nevertheless, for winter blooming I have found it best to grow this variety entirely under glass in summer, as otherwise, after an abnormally wet summer or a normally damp autumn, Britannia is liable to develop the dreaded spot disease. I think you have done a real service to those not acquainted with these facts by question-



SAXIFRAGA LONGIFOLIA IN A BAVARIAN ROCK GARDEN.

ing and calling attention to what at first certainly might be taken for an inconsistency.—LAURENCE J. COOK.

FORTHCOMING EVENTS.

March 5.—Royal Horticultural Society's Meeting and Forced Bulb Show (two days). Lecture at 3 p.m. on "The Stimulation of Plant Growth," by Professor H. E. Armstrong, F.R.S., M.D.

March 5.—Scottish Horticultural Association's Meeting.

March 7.—Linnean Society's Meeting; Manchester and North of England Orchid Society's Meeting.

March 9.—Chester Paxton Society's Meeting. Lecture at 8 p.m. on "The Natural History of Nyasaland," by Professor Robert Newstead, M.Sc., A.L.S.

CHRYSANTHEMUMS.

SEASONABLE NOTES.

THE Chrysanthemum is a cool temperature plant and is not improved by undue artificial heat, but rather injured. Those readers possessing cool frames should now make some use of them, for these plants succeed better in them than in a heated structure after this date.

Potting Plants for Various Purposes.—All plants are not grown for the same purpose. Some, of course, are grown for exhibition only; others are required for the decoration of the greenhouse or conservatory, or for the supply of cut flowers. When first potted the end in view should be borne in mind, so that the work of repotting may be carried on as it should be. It is necessary to determine now how many plants shall be grown in

the flowering pots; then suitable sizes may be used in the meantime. If plants are to be grown for specimen blooms on single-stemmed plants in 10-inch pots, the first potting should be in 3-inch pots and the second in 4½-inch pots. For specimen plants bearing, say, from nine to two dozen blooms or more, the second potting must be in 6-inch pots, and so on to 12-inch flowering pots. Some plants are flowered on one stem in 8-inch pots, and others from spring-rooted cuttings in 7-inch pots. In each case the first potting must be in 3-inch pots and the second in 4½-inch pots and 6-inch pots respectively. Those plants in the 6-inch pots should be finally transferred to the 8-inch pots.

The Best Soil.—For the first potting use fibrous loam two parts, leaf-soil one part, rotted manure and coarse sand one part. To a bushel of the above add a 3½-inch potful of wood-ashes and 4oz. of

bone-meal. For the second potting use loam and leaf-soil as before, but in a more lumpy condition, a similar quantity of rotted manure, but 6oz. of bone-meal, some approved concentrated fertiliser according to the directions, a 6-inch potful of wood-ashes, and a 4-inch potful of soot with the coarse sand. One crock, well placed in the pot, with some lumps of turf on it, will provide sufficient drainage. Too many crocks are used as a rule, and they take up space that should be occupied by compost. Keep the newly-potted plants close together in a frame with the lights closed for several days, and do not water for three days. An early morning spray from the syringe will be very beneficial. Admit air freely afterwards.

Stopping.—Plants that are to be treated for the production of second-crown buds generally, and others to form specimen plants, must be stopped about the middle of the month. Very late-flowering varieties that are to bear first-crowns, such as *Mme. Rivo!*, must be stopped at the end of March.

Propagation of Border Varieties.—The cuttings may be inserted 3 inches apart in boxes 6 inches deep in 2½ inches of compost, and covered with loose squares of glass. Give a good watering, place the boxes on a warm stage or bed of any house with a summer temperature, and there will soon be nicely-rooted young plants for potting-off. Avon.

WORKERS AMONG THE FLOWERS.

THE REV. J. JACOB.

THE name of Mr. Jacob will be a familiar one to most of our readers, and in response to numerous requests we now have much pleasure in publishing his portrait. From his earliest days Mr. Jacob has been devoted to the study of flowers, and when at Uppingham took a keen delight in collecting wild flowers, winning several prizes for his collections. Later on at Cambridge he took his degree in Botany (Natural Science Tripos), so that when he commenced the cultivation of flowers he had received a good grounding in their structure.

As will be gathered from his articles which we have published from time to time, Mr. Jacob is particularly interested in Daffodils and Tulips, and in his rectory garden at Whitewell, near Whitchurch, Shropshire, he grows extensively both these flowers. Owing to his being in great request as a judge at Daffodil shows, he has not been able to devote enough time to hybridising, and the introductions with which his name is coupled, viz., Whitewell, Orient and Mrs. W. O. Wolesey, are not his own raising. Other plants which are grown on a large scale at Whitewell are Columbines, Sweet Peas, Lachenalias, Nerines, Carnations and Polyanthuses. Mr. Jacob's strains of the first and last of these are particularly good.

During recent years he has made a hobby of collecting old gardening books, and his library now contains some very rare specimens, notably, *Hortus Floridus* of Passæus, Haworth's Monograph on the Narcissus, *Le Floriste François*, *Twelve Months of Flowers* and *Twelve Months of Fruits*, and *Vallet's Le jardin du Roi très Chrestien Louis XIII.* As indicative of the active interest that he takes in horticulture, we may mention

that Mr. Jacob is a member of the Royal Horticultural Society's Narcissus committee, a vice-president and member of the committee of the Perpetual Flowering Carnation Society, chairman of the Midland Daffodil Society's committee, member of the National Sweet Pea Society's committee, president of the Whitchurch Sweet Pea Society, chairman of the horticultural section of the Whitchurch Agricultural and Horticultural Society and secretary for the Shropshire committee of the International Horticultural Exhibition. It is to the efforts of such amateurs as Mr. Jacob, who labour for the love of the flowers they are interested in, that our gardens of to-day owe much of their beauty, and we feel sure that our readers will join with us in the earnest desire



THE REV. JOSEPH JACOB.

that he may be spared many years to continue the good work that he has set his hand to.

TREES AND SHRUBS.

THE DAPHNES AND THEIR CULTIVATION.

I KNOW of no genus of plants more interesting, sweeter, or more beautiful than the Daphnes. They are not all easy to cultivate, it is true, and this is all the more reason for doing one's best to cultivate them. Their very ornamental flowers, their erect, tufted growth, but, above all, their delicious perfume, place them in the very first rank of rock plants. I have been collecting and cultivating them for more than forty years without having succeeded with all the varieties which have been described or knowing exactly the treatment suitable for two or three of the more delicate varieties, notably *Genkwa* (see illustration on page 105) and *yezoense*. With regard to the saxatile and alpine varieties, however, I think I may say that we cultivate them all successfully at *Floraire*.

Unfortunately, the different species or varieties of *Daphne* are known in gardens under all sorts of names, and it is absolutely impossible for an

amateur who is not conversant with their nomenclature and synonymy to recognise them. I have found in the gardens of England and Germany *D. collina* grown under six different names, and *D. Cneorum* under three or four! The following is a short review of the Daphnes which are actually in cultivation:

D. alpina.—A little shrub from 1 foot to 3 feet high, with very divided branches, white, slightly-scented flowers and frail leaves. It grows in the calcareous rocks of the Alps, the Apennines and the Pyrenees in full sunshine.

D. altaica, the Asiatic variety, differs from it by its erect growth, frail leaves and white flowers.

D. arbuseula.—There are two plants under this name. One is a form of *D. Laureola*, described by Dr. Chriet of Bâle; the other a horticultural form of *Cneorum* which I formerly received from Vienna.

D. atropurpurea is a *Mezereum* with purple black leaves. It is only a gardener's variety.

D. blagayana is well known in England, where I have seen the largest specimens in existence. It is an Austrian plant, which has only been known for three-quarters of a century and cannot be grown everywhere. In our alpine gardens, especially at Linnæa (at an altitude of 4,500 feet), it becomes very beautiful, but does not attain the extraordinary proportions which I saw at Edinburgh and Glasnevin.

D. buxifolia is a miniature form of *D. alpina*, with obtuse leaves, silky grey underneath.

D. caucasica, also known under the name of *D. salicifolia*, is related to *D. altaica*, from which it is distinguished by its taller stature (I have known plants to be from 4 feet to 5 feet high), by its longer glaucous leaves and by its larger greenish white flowers. I received from the Botanic Gardens of Moscow twelve years ago a plant of

D. Sophiae, the leaves of which are streaked with white and green, the flowers white and scented, and which is about midway between *D. altaica* and *D. caucasica*.

D. Gnidium, of the Mediterranean regions, has green flowers which are hardly noticeable, but, thanks to its very ornamental foliage, which recalls that of *Veronica Traversii*, it is a decorative shrub for shady and dark places.

D. hybrida (*D. Dauphinii*, *D. Delphinii* or *D. indica*) is a beautiful Asiatic shrub, with large, glossy, evergreen leaves and little clusters of very fragrant reddish violet flowers, which is not quite at home with us, as well as in the centre and North of England.

D. Laureola, as well as its variety *Philippii* of the Pyrenees, is a shrub characteristic of deep and shady woods. It has fine, glossy, evergreen foliage and green flowers which are followed by black berries.

D. pontica, of which I have seen an enormous specimen at *Munstead Wood*, is closely related to it, and is distinguished from it by its elliptically-oval leaves and its flowers suspended from the end of long pedicels.

D. Mezereum and its various forms are too well known for me to enlarge upon them. The *D. odora* of Japan, with its variety *marginata* and the *D. japonica*, are among the sweetest of the known flowers. In the North of Italy, the South and West of France, and also here and there in England, but very rarely, however, one sees in the half-shady places of gardens these delicate and scented shrubs, and the perfume of their flowers is diffused all

around. The first-named has lilac rose flowers, the variety *marginata* has leaves edged with white and yellow, and *japonica*, which is more erect, has flowers of a very pure white and more elliptical leaves.

D. oleoides of Greece is related to *buxifolia*. It can stand our winters well, but last year it suffered with me from the ardent sun of the early spring.

D. Pseudo-Mezereum, seeds of which were sent me ten years ago from the Botanic Gardens of Tokyo, has never flourished with me; but a Chinese or Japanese *Daphne* which was given to me by M. Maurice Vilmorin under a number closely resembles it in growth, and has given me very fragrant, bright orange flowers. It has not been described. Let us now turn to the most alpine, the most rock-loving and the oldest of the *Daphnes*,

D. rupestris or *petræa*.—This grows spontaneously in the rocks of Trentin, on the north side of Lake Garda and Icdro, and spreads over the face of the rocks its clusters of beautiful clear carmine flowers. The bushes are dwarf and close-growing, the branches compact, and the evergreen leaves dark glossy green. We cultivate it at Floraire in full sunshine, and raise it from seeds, cuttings and grafts. We once found a white-flowered variety, but we did not manage to preserve it. I have just received from Petersburg a new *Daphne* named *D. kamschatica* which I have no knowledge of yet, but it may, of course, prove to be something interesting.

The propagation of *Daphnes* is a slow but not difficult process. It is effected by means of seeds (which take at least a year to germinate), cuttings, layers and grafts. All the *Daphnes* will root from cuttings, in spite of what is generally thought.

We have raised by the hundreds the most difficult of all, *D. indica*, and even *japonica* and *odorata*, for the clients of our establishment at Floraire usually prefer them to the grafted plants. They take sometimes two years to form roots! *D. rupestris* is the easiest to raise from cuttings, but its growth is the slowest of all. The work is very fascinating, and well repays the trouble entailed, although this, at times, is very considerable.

Floraire, Geneva. HENRY CORREVON.

THE VIRGINIAN WITCH HAZEL.

As a flowering tree the Virginian Witch Hazel (*Hamamelis virginica*) is of small account, the flowers being but little in evidence. Then at other seasons than autumn it is not especially attractive. On the other hand, when it colours well in autumn, as it usually does, the amber hue of the leaves gives a really good effect, and we see that it has some value for the purpose of adding this hue to the garden, although, of course, there are other shrubs which will also afford it. Still, the Virginian Witch Hazel may be kept in view, though it is less attractive in other respects than its allies.

S. A.

THE ROCK AND WATER GARDEN.

DWARF FORMS OF SAXIFRAGA AIZOON.

THE dwarf forms of *Saxifraga Aizoon* are among the most fascinating of this group, forming dense, tightly-packed clumps of tiny grey rosettes that enjoy the fullest sunshine in the crevices of the hot rocks, the intense heat of which would be sufficient to wilt the leaves of the larger silvers. The form known as *Portæ* is intermediate between the type and the miniatures, and is a pretty little plant, though not possessing the attractiveness of the true dwarfs. *Minima* is one of the most charming of the diminutive section, appearing almost like a close-growing grey moss that clings tightly to the rock faces. A variety introduced as *labradorica* is another delightful

so small a plant. There are many handsome hybrids of *S. Aizoon*, *S. Malyi* being one of these, as in all probability are *Churchillii* (with firm rosettes of pointed leaves), *elatior*, *Gaudinii* and *rhætica*.

These handsome hybrids well merit introduction into the rock garden, for their cultivation is very simple and they are distinctly attractive, two properties which are, unfortunately, rarely possessed at the same time by alpine plants. *S. Engleri* is not to be excelled in beauty as regards its foliage, the great rosettes of narrow, blue and silver grey leaves being most lovely. *S. Hostii* is a very rapid grower, with dark greenish grey leaves that lack the silvery brightness of many others of the encrusted section, and *S. altissima* is apparently only a strong variety of *Hostii*.

WYNHAM FITZHERBERT.

ANDROSACE LAGGERI.

ANDROSACES are always coveted by those who are devoted to the cultivation of alpine plants, and



DAPHNE GENKWA, A LITTLE-KNOWN SPECIES WITH LILAC-BLUE FLOWERS.

little plant, quite as dwarf as *minima* and equally captivating. There are many other dwarfs which have been sent out under manifestly incorrect names, some of which titles belong, by right, to the mossy race of *Saxifrages*.

However, under whatever appellations they masquerade, all of the dwarfs are well worth growing, since they are of the easiest culture and will add to the delights of the rock garden, being among the most desirable and enduring of all their great and lovely family. One, labelled with the impossible name of *La Ga Dauphane*, is an extremely pretty miniature plant. Its habit, with its tiny silvery rosettes, is very pleasing, and its constitution leaves nothing to be desired. The ruddy flower-stems are 6 inches in height, and the four to six blossoms on each stem are creamy white, thick and wax-like, and large for

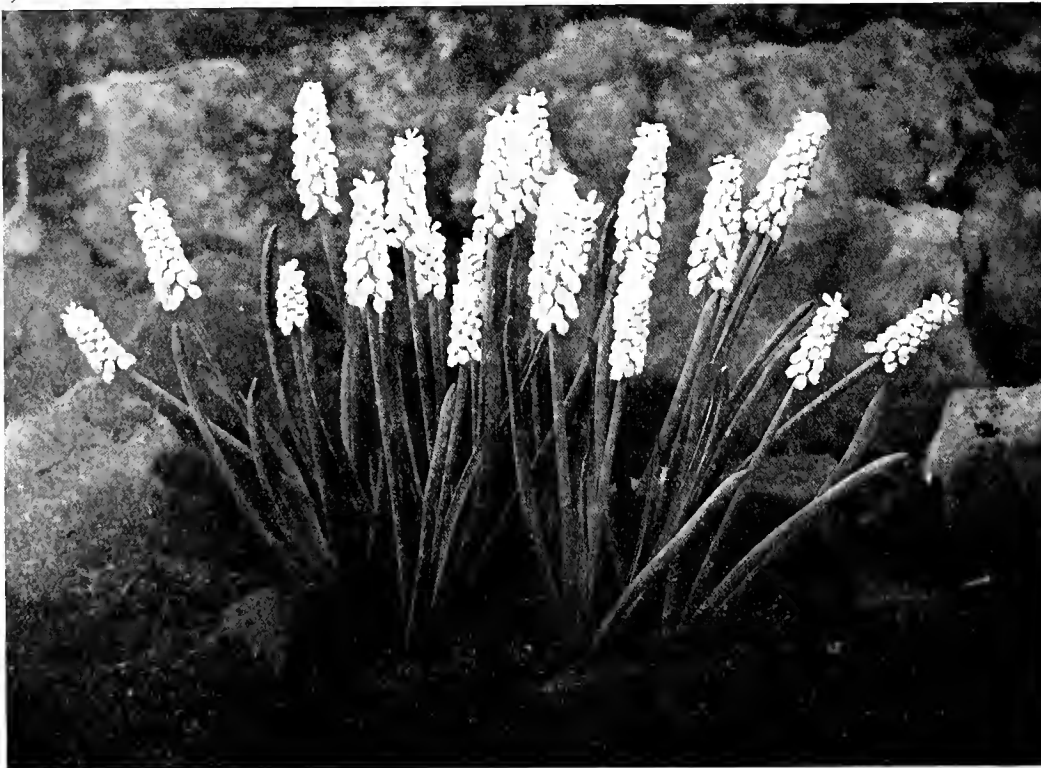
there are few which better reward their notice than the charming species known as *A. Laggeri*. It is not one of the most difficult, by any means; it is beautiful enough to satisfy the most fastidious; and it is a true perennial which braves the uncertainties of our climate as well as any other *Androsace*, and far better than many of them. Thus, it does not appear to call even for the glass protection in winter which is so advantageous to many, and its needs are few, save in the shape of annual top-dressings of fine soil well worked among its rosettes.

If it is planted on a level spot, or one which is nearly so, given a light, gritty soil, partial shade and abundance of water at the roots in summer, it is almost certain to thrive. *A. Laggeri* is of the same type as *A. carnea*, but has the pretty, deep green, spiny leaves more

distinctly arranged in little rosettes. The flowers are at first sessile, but afterwards rise slightly above the plant itself, and look very dainty with their rose or deep pink little petals, each lighter towards the base. It is one of the choicest of all alpine flowers. S. ARNOTT.

THE WHITE-FLOWERED GRAPE HYACINTH.

FEW of our early spring bulbous plants are more welcome in the rock garden than the Muscari in its several varieties. Coming into flower, as they usually do, at the end of February or early in March, groups of these charming white or blue Grape Hyacinths are very cheering. A strong point in their favour is the fact that they seem to thrive in quite ordinary soil, and sow themselves so readily that they spread into irregular patches in a quite delightful way.



THE WHITE-FLOWERED GRAPE HYACINTH (*MUSCARIA BOTRYOIDES ALBUM*) IN THE ROCK GARDEN.

What preference they have seems to be for a moist, cool soil, such as the drier part of the bog-bed, while they look well coming through a carpet of *Saxifraga oppositifolia* or *Arenaria balearica*, and seem very happy in such positions.

They appear to me to look best in small colonies, rather than the vast plantations which one sometimes sees in large gardens, when the daintiness of the individual blossoms is to a large extent lost. Here at Woodford I find it advisable to stretch a few pieces of black cotton over the plants, or the sparrows investigate the buds long before they are expanded—with the usual result. Varieties which do very well with me are *M. botryoides* and its white form *album*, which is shown in the accompanying illustration, and *M. azureum*, sometimes, and I believe correctly, called *Hyacinthus azureus*, and these will, I feel sure, give great delight to all who grow them.

Woodford, Essex.

REGINALD A. MALBY.

THE GREENHOUSE.

HOW TO GROW FREESIAS.

THE cultivation of *Freessias* is shunned by a number of people after one or two attempts, as, unless one "knows the ropes," it is difficult to get them to flower satisfactorily. Experience is the best teacher, and after a number of years of steady perseverance I really think that this season, for the first time, I may say that I have mastered all the secrets and made the plants behave well enough to thoroughly please and satisfy me. I am convinced now that the greatest mistake and the most fertile source of failure is the coddling of the plants. The amateur is always in a hurry for the flowers, and imagines that to get plants into bloom he has only to keep

pots are stood outside where they may get the benefit of all the rainfall that is going, and housed before the frosts commence, weeding, of course, being well attended to throughout. The potting compost favoured here is good loam, well-decayed manure and leaf-mould, made porous with the addition of a fair proportion of sand.

As to varieties, the old *refracta*, *refracta alba* and *Leichtlinii* will always be favourites for their pure colouring and charming, delicate fragrance; but, thanks to hybridists, there is now such a wide range of colour that the lover of *Freessias* should by no means restrict himself to the above three. *F. Chapmanii*, given an award of merit by the Royal Horticultural Society a few years back, is of a rich golden yellow colour, and should be included in all collections. Then, in addition, there are the charming new varieties raised by Mr. Van Tubergen of Haarlem, several of which

I am trying this year for the first time, and they surprise and delight the grower not only by their novel range of colour, but by their vigour and free-flowering qualities. Side by side in my greenhouse with the old species, the latter are not in the running with Van Tubergen's for vigour of growth and floriferousness, the Dutch plants carrying more flowers to the spike, on longer stems, and the whole pot making an altogether more effective display. Of those that I am growing, a variety named *Salmonetta* charms me the most. The colour is a rich tone of chestnut red, shading to old gold at the throat, a fascinating combination showing well under artificial light. Abundance is the freest-flowering of the lot, producing literally in abundance its lilac rose flowers, which deepen in colour with age. *Giant* should be a useful variety to the raiser of seedlings, being a plant of great size and vigour, its long stalks bearing large flowers of delicate lavender. *Le Phare* at first sight did not appear to differ greatly from *Abundance*, but now that the plants are in full flower I can see that the more yellow throat and rather deeper hue of the flower make it more brilliant and effective. *Multicolore* is a strong-growing variety, pale rose, with a tinge of yellow, but has perhaps a little too much white in it to make it really effective. Contrast, described

as white, with a very telling orange blotch on the lower petals, I am not growing; but if it at all resembles *Fairy Queen*, it is a fine showy flower, and this latter is undoubtedly a very telling and striking variety if well grown.

Mr. Van Tubergen writes me that the finest pure rose seedling he has yet raised is *Conquest*, which is about the colour of *Rhododendron præcox*. This is not yet, I believe, in commerce, but he hopes to show it in London this spring. I conclude my list with a mention of *Rose Queen*, of which Messrs. Barr have the stock. This obtained an award of merit from the Royal Horticultural Society in 1909, and is of handsome rich carmine rose colour, a revelation to those who only knew the old white or whitish varieties, and to many who little dreamed that our plant-houses would become enriched with the welcome variety of colour which we can now enjoy.

Rye, Sussex.

F. HERBERT CHAPMAN.



Some good Gaillardias—

1. Kenilworth.
2. Kelway's King.
3. Sunbeam.
4. Copper King.
5. Glory.

A GREENHOUSE SUGGESTION FOR SPRING.

THERE are possibly readers who are rather tired of the usual *omnium gatherum* of all sorts and conditions of plants in their glass-houses in the early months of the year, and who would be glad of suggestions as to how the everlasting sameness can be avoided. Putting my suggestions into a nutshell, they resolve themselves into the advice, "Grow collections." Beyond all dispute those who get the greatest pleasure and interest out of their gardens are those who specialise and who are continually raising their own seedlings. When these seedlings are about to come into flower for the first time, they are like the prodigal son of the Parable, and shut out everything else from our vision, and no words are too extravagant to record our joy of heart.

On the old principle that half a loaf is better than no bread, a very good substitute can be found in growing collections of more or less unknown plants. There is all the excitement of waiting for the newcomers to open, the interest of comparing one with another, and, the classifying of them all according to our own individual taste.

Every year I try to do something like this myself. A springtime without a collection would be like a springtime lost. Luckily, I suppose for me, Tulips and Daffodils lend themselves beyond other families to this purpose. Take Tulips. There are the early Duc van Thols; there are the early singles and the early doubles, and, in the case of the former of these, the many subdivisions into pinks, reds, striped, &c.; there are the Darwins and so on. A pound or even half-a-sovereign spent on a collection of, say, six of a sort of any one of these subdivisions will give a new pleasure. It is much the same with Daffodils. One year let it be Polyanthus Narcissi or Poeticus varieties; then in another it might be trumpets or Leedsii or Barris.

The list might be extended by including Freesias (for there are now named varieties of Van Tubergen's and Chapman's hybrids in commerce, or seed of the Ragionieri hybrids can be procured very cheaply) and Hyacinths, double, single and miniature. This year I have grown some of these in 12-inch pans, and the result has once again shown me their value for decoration. Schotel (bright pale blue), L'Innocence (white), and Winter Cheer (soft carmine) have all been very good. Collections need not, of course, be confined to bulbs. Zonal Pelargoniums, Cinerarias and Primula species or varieties at once occur to me as suggestions of other possibilities. I ought, in conclusion, to say that what I am now suggesting does not mean that no other plants are to be grown except those under trial. Old friends will still find a place; only new-comers will be added as they prove themselves by their flowering behaviour to be worthy of a place beside them. JOSEPH JACOB.

COLOURED PLATE.

PLATE 1446.

GAILLARDIAS AND THEIR CULTIVATION.

WERE we asked to name the most gorgeous and profuse flowering border perennial of the year, the one above all others which makes the garden gay during the dullest weather, or revels in the most brilliant sunlight, we should unhesitatingly select the Gaillardia, or "Blanket Flower," as it



THE NEW FREESIA CONQUEST. (See page 106.)

has been popularly called. Further, were we asked to name the person or firm chiefly responsible for the high merit and excellence we see in the present race of these plants, we should as promptly give the name of Kelway and Son, Langport, than whom, probably, none in this or any other country has done half so much towards the improvement of these plants. We speak now of the modern race of the Gaillardia, remembering well the type of former years before the specialisation of the flower began. To-day we look upon

a much more brilliant assembly of these plants, larger and handsomer in flower, more decided and varied in colour, with entirely new and distinct shades added thereto.

For proof of the improvements of which we write, we have but to refer our readers to the coloured plate in the present issue, where some of the newest and best of these Gaillardias are so faithfully reproduced, the flowers being kindly supplied by Messrs. Kelway. To take but two of those depicted in the plate, viz., Glory and Kelway's King, we have at once revealed the contrasting variability of the race, wedded, as it were, to almost wholly self-coloured flowers, or, to be more precise, flower-heads. These we regard as something more than improvements; we look upon them rather as of an epoch-making character, from out of which it is not possible to see what may be evolved in the near future. We remember how distinctly impressed we were some years ago when Vivian Grey, the pioneer of the self yellow class, also of Messrs. Kelway's raising, first came to be exhibited; while in Kelway's King of the present time we see both evidence and influence of this really remarkable break.

The variety Glory is remarkable from an exactly opposite standpoint, in that all the yellow colour has been deleted from its florets save at the veriest tips, where it constitutes a powerful contrast to a flower already conspicuous by its unequalled splendour and brilliancy.

Culturally, these Gaillardias present few difficulties, the plants growing freely and delighting in rich and, for the most part, comparatively light, sandy soils. Those of an opposite tendency, like clay, should have the addition of grit, sand, light manure and leaf-soil—anything, indeed, that will tend to porosity and warmth. The planting should be done without delay. Given these, we know of no plants more desirable, none better suited to effective gardening in massed beds or groups, none more valuable in the cut state, and certainly none more profuse flowering, which alone must commend them to all lovers of hardy border flowers.

FLOWER GARDEN.

HARDY ANNUALS FOR CUT FLOWERS.

PLANTS which supply quantities of cut flowers are highly appreciated in all gardens. Some of the hardy annuals will give a very quick return of excellent flowers under good cultivation. The following have proved to be among the best for this purpose, and they will grow well in ordinary garden soil providing it has been deeply dug and is sufficiently rich in humus.

The Coreopsis, of which there are many strains, deserves extensive cultivation. The colour of the flowers is brilliant, they have long stalks, and are of long duration. They range in height from 1 foot to 2 feet. Some of the taller-growing

Candytufts are valuable, their flowers being useful for bouquets. The new strains of this popular annual are very floriferous, and the pleasing rose, pink and snow white flowers are very beautiful. Some very good strains of the annual Chrysanthemum (*C. coronarium*) have been raised during recent years, and many of these are valuable as cut flowers. There are both double and single forms of this annual; they grow from 1 foot to 2 feet in height, and are very free-flowering.

Few flowers are more useful than those of the Cornflower. They are too well known to need any further description. I may, however, add that a new giant blue form of this popular annual

have a particular liking for the tender seedlings, I have found light but repeated applications of soot around the plants as soon as they are through the soil to be one of the best dressings that can be used. I cannot conclude this note without reference to the Sweet Pea, undoubtedly the annual to grow for producing abundant and continuous supplies of beautiful cut flowers.

COLIN RUSE.

SWEET PEA NOTES.

Chipping Seeds.—A practical correspondent takes me to task in a Scottish contemporary on this subject. He does me the honour to quote

deploring the passing of the real Sweet Pea, and laments the growing popularity of the "deformed and too often scentless flower that now bears its name." Is this quite fair? I am not inclined to think so. No one regrets more than I do the fact that the modern varieties are losing some, at least, of the delightful fragrance to which the flower owes its name; but there have been wonderful improvements in other directions, and it seems to be a rule that we cannot secure advancement in all the desirable attributes of a flower. In the Rose and the Carnation, curiously enough, evolution has been marked by precisely the same loss—that of perfume—which we now have to regret in the Sweet Pea. This would be poor consolation for "An Amateur" were it not for the undoubted fact that those old varieties which are so sweetly scented and so refined of form are as readily procurable as the modern monstrosities, and at a much cheaper rate.

Six Novelties.—First it is Professor Biffen and then it is Mr. H. P. Boyce who urges that I shall give a list of novelties. The latter, on page 79 of *THE GARDEN* dated February 17, suggests that the number should be restricted to six, assuming, perhaps, that by naming such a small figure he is making my task easier; but the contrary is the case, for I could mention twelve or eighteen with less trouble than six. However, I am forced to the task, and call upon all readers who differ from me to send along their lists with a persuasively-worded letter to the Editor asking for publication. My particular fancies for the season are Prince George, a distinct bronze fancy; Mrs. Cuthbertson, a white-winged bicolor; Walter P. Wright, pure light blue; Scarlet Emperor, whose colour will not burn; Barbara, salmon; and Loyalty, violet flake. I await the criticisms with equanimity, since I safeguarded myself behind the

plain statement that these appeal personally to my individual taste. HORACE J. WRIGHT.

THE IBERIAN CRANE'S-BILL.

The Iberian Crane's-bill (*Geranium ibericum*) is a handsome border or large rock garden plant, giving masses of foliage and a profusion of blue flowers and reaching a height of from 1 foot to 2 feet, according to the nature of the soil in which it is planted and the natural habit of the form employed. It is variable in its height, naturally, and its flowers also vary in character and in colour. The typical flower is of a good blue, but the variety *platypetalum*, which is shown in the accompanying illustration, has these more violet in their hue, with considerably broader petals, thus affording a larger and more shapely flower. It is of rather smaller stature than some of the other forms, and may well be preferred when choosing plants for the rock garden or the border. These Crane's-bills are useful summer flowers, which can be cultivated in almost any soil, although the blooms are finer and last longer if the plants are in a fairly rich compost. Through error, the variety here figured is sometimes called *G. i. platyphyllum*.

S. ARNOTT.



A BEAUTIFUL CRANE'S-BILL (*GERANIUM IBERICUM PLATYPETALUM*) ON A TERRACE BORDER.

is well worthy of a trial. The annual *Gypsophila* (*G. elegans*), both the pink and white forms, should be grown more extensively in small gardens. It requires no special treatment, and is almost indispensable for mixing with other flowers, its inclusion adding a light and graceful effect to vases when used for table and other decorations.

The brilliant and profuse-flowering *Godetias* include some flowers of charming colour, and many of the tall-growing new strains are eminently suited for the purpose under notice. For producing a bold, striking effect when arranged in large vases, few flowers can excel *Lavatera rosea splendens*, a strong-growing annual 3 feet or more in height. *L. alba* is also excellent, although the flowers seem to lack some of the substance which the former possesses. The sweet-scented and universally-admired *Mignonette* should be found in every garden. The *Nigella* (*Love-in-a-Mist*) *Miss Jekyll* is a handsome annual.

Among the numerous family of annual *Poppies*, the Shirley strain is the most suitable for producing cut flowers, and although the flowers are of somewhat short duration, this is amply compensated for by their brilliant colouring and graceful habit. The Sweet Sultans should be seen more often in gardens. They are very charming flowers and not difficult to grow; but my experience has been that slugs

my paragraph from *THE GARDEN*, in which I deprecated the system of chipping all seeds prior to sowing on the score of time, which was often largely wasted. My critic is a staunch advocate of the method, and recommends his readers to have recourse to it, or, failing that, to soak all seeds for several hours before sowing. I have no personal objection to chipping or filing except the one stated, but I assuredly would not advocate soaking. It does no harm, and may best be described as a pastime of no practical value. Seeds of Sweet Peas may be soaked for an unlimited time, and it will not soften them in the slightest degree, and will not favour even a quick germination. It has been tried repeatedly, and a brother Scot of my friendly critic, Mr. Andrew Ireland of Dobbie's, who ranks in my estimation among the half-dozen foremost authorities on Sweet Peas in the world, has proved to demonstration that soaking is of no assistance whatever. He, however, is substantially a believer in chipping where only a small number of seeds have to be handled, and therefore is partly for and partly against me and my critic. We will, then, call the honours easy.

The Modern Sweet Pea.—On page 66 of *THE GARDEN* dated February 10, "An Amateur"

CHINESE ASTERS AND HOW TO GROW THEM.

ALTHOUGH cottagers and other amateurs have for years realised the value of the so-called Chinese Aster, *Callistephus chinensis*, it is only during the last decade that Asters have entered to any large extent into the decorative schemes of our more pretentious gardens. The appreciation of these flowers during recent years by professional gardeners is no doubt due to a large extent to the vast improvements which have been brought about by our leading seedsmen, improvements which have given us a delightful range of clear, well-defined colours and a great and pleasing diversity of form. Thus, in what is known as the Comet section we get large flowers with beautiful reflexed petals reminding us of Japanese *Chrysanthemums*; while in direct

Their cultivation is quite simple. The earliest plants are raised under glass, either in a warm frame or greenhouse, and the present is quite early enough for the first sowing. Another batch should be sown towards the end of March, and for this a cold frame answers well. Outdoor sowings may be made, where the plants are to flower, from the middle of April until the second week in May. Sown at different times as suggested, Asters may be had in flower over a considerable period. For sowing under glass, use boxes or pans about three inches deep, and see to it that they are well drained. Good loam two parts, decayed manure or leaf-soil one part, and sharp sand one part, the whole passed through a half-inch-meshed sieve and thoroughly mixed, makes a good soil for seed-sowing. After the boxes or pans have been well drained and some rough soil placed over the drainage, fill the receptacles with the sifted soil, so that when it is pressed

from the outset. It is safe to assert that many thousands of plants are annually ruined through being subjected to too much artificial heat; those sown at the end of March and grown on in an entirely cold frame are usually the best.

When the seedlings are about one and a-half inches high, they must be pricked off 3 inches apart into other boxes or pans filled with soil similar to that advised for seed-sowing, except that it need not be so finely sifted. Shade from sunshine for a day or two after pricking off, and then grow on as near the glass as possible so as to keep the plants sturdy. Towards the end of April and during the first week of May remove the frame-light altogether during the daytime, and about the third week in May the plants may be safely planted out in the open.

Chinese Asters appreciate a rich and rather cool soil, hence where they are to be grown should be



ANNUAL ASTERS IN THE GARDENS AT THE OLD HALL, FRITTON, NORFOLK.

contradistinction we have the *Pæony*-flowered, with their globular heads, and the ordinary single and ray types, as well as several intermediate sections. Thus in form alone there is sufficient variety to please the most fastidious, and as seeds of nearly if not quite all sections can be had in separate colours, it is possible to carry out a delightful colour-scheme with these Asters alone.

moderately firm it is rather more than half an inch from the top. Scatter the seeds thinly and cover with sharp, clean sand. This is better than soil, as it keeps the collars of the seedlings comparatively dry, and so prevents that decay usually known as damping off.

Seedling Asters should always be grown as sturdily as possible, and with that object in view afford them all the ventilation that is reasonably possible

deeply dug and rather heavily manured, using manure that is fairly short and well decayed, and see that it is thoroughly mixed with the soil. About a foot apart each way is a good distance to plant Asters. The accompanying illustration, which aptly portrays the flowering capabilities of Asters when well grown, is from a photograph taken in the gardens at The Old Hall, Fritton, near Great Yarmouth, Norfolk, the seat of W. A. Ward, Esq.

SPRING IN THE OUTDOOR GARDEN.

THE Editor asks me to contribute to the Spring Number, but on such a day! True, the cruel east wind of the last week has departed in the night, and the frost and snow it brought, deprived of their sparkling beauty, are slowly turning to slush and moisture; but at such a moment of transition it is with feelings of singing a Song of Zion in a strange land that I sit down to write of spring. How can I forget that we have lately registered 24° of frost in open places of this neighbourhood, that the cold snap came suddenly after a spell of abnormally mild, damp weather, so that almost everything was in sappy, forward, unhardened growth, and now, most likely, many of the more tender possess ruptured vessels, like burst water-pipes, that will not show the results of their destruction until the thaw is complete? I simply cannot call up visions of purple cataracts of Aubrietias or creamy and buttery drifts of Daffodils in the meadows. I do not know why, but a broad stretch of them in the grass is always associated in my mind with these dairy products, especially when seen in the distance.

No; I will not try to write of what is to be, or I may next find myself comparing the hues of Darwin Tulips with raw meat. I will write of the stern present and its visions of Hope. Even on this gloomy, cloudy, muggy day the drizzling rain is softening the ground and spring plants are pushing through, and there is much of interest to be noticed in their manner of resurrection.

One that really *pushes* is the Winter Aconite; "thrusteth up divers leaves," as Parkinson puts it. It seems as though it feels it must be first in flower in the New Year. Doubtless in its native haunts in Central Europe it gains some advantage by this hurry—a greater certainty of insect visitors to the quaint little trumpet-shaped nectaries that represent, as in its close relative the Hellebore, the floral whorl that men call petals in other flowers. Its method of winning the race for priority repays examination. To do so, dig up a root or two in late December and keep them in a warm room covered with damp moss or sawdust. They can then be examined at daily intervals, and it will be seen that the secret of success lies in its habit of forming leaves and flowers below ground, and bringing them to a higher degree of development there than do most plants. While still well wrapped by four protecting scales, the stem begins to lengthen at the end furthest from the flower-bud, which, being firmly held by the scales, is bent over until the growing portion of the stem develops into an arch. It continues to grow faster at the base than near the bud, until the summit of the arch reaches the surface of the ground and the bud is lifted upward from the protecting scales, but still in this inverted position, and all the work of "thrusting" is still done by the upper portion of the arched stem. Thus on the softening of the surface, when the

snow melts, a few warm hours are sufficient for the straightening of the stem, and the bright yellow flowers, sitting so short-neckedly in their green ruffs, are ready to receive any stray bee or fly that is on the look-out for a sip of honey. As these alight in the centre of the flower, cross-fertilisation is easily effected.

The same method of thrusting is employed by the flower-spikes of Epimediums, some Hellebores, Wood Anemones, Corydalis and, of course, many seedlings, French Beans, for instance, all of which use the bent stem to push a way through the soil for the delicate leaves or flowers.

But quite a different one is that used by Snowdrops and Daffodils. Here we find the tip of each leaf thickened into a fleshy, colourless, hardened cushion, and when they first appear

leaves, and thus united their strength is wonderful. Canon Ellacombe has recorded how a group of Crocuses were left buried under a gravel walk made to cross the border in which they grew, and that year after year they never failed to pierce through the surface of the well-rolled gravel.

When collecting wild species of Crocus near Athens some years ago, I was much interested in noticing that many of them reappeared every season in the exact line in which their leaves had pushed up ever since they began life as a seedling. This was especially noticeable with *C. cancellatus*, whose corm tunic is made of such tough reticulated fibre that it lasts undecayed for many years. I found many of the corms were wearing the old tunics of fifteen previous years, and the growths of the present season had speared right through the centre of four others, each of which was a size smaller, as it was placed further away from the present position of the corm. These latter were, of course, the tunics of the seedling in its first to fourth years, and had been left behind in the track of loosened soil, through which the corm had been annually pulled a little deeper until it reached the depth suited to it, and up this slightly looser track of soil the annual growths of nineteen years had travelled to reach the surface. When competing with the wild grasses and other plants, it seems from these Greek species and others I have collected myself or had sent to me just as collected, that increase by multiplication of the corms is but small, seed being the chief means of increase in a wild state, and I find that if rapid increase by corm division is desired, careful cleaning off of old tunics and fairly shallow annual replanting give better results than deeper planting and less frequent lifting.

I hope before this is in print the sun may again be shining and the beauty of open flowers be with us, but that a few later forms may still be thrusting through, and that some of my readers may be induced to notice their methods of reappearance. There is always something of interest in the garden,

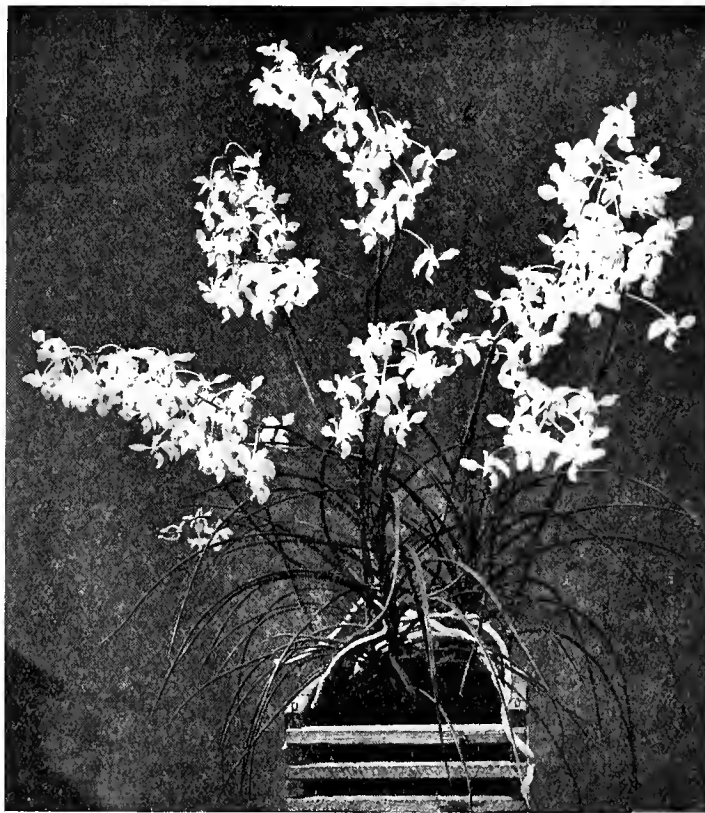
but the spring is, perhaps, the most delightful season of all.

E. AUGUSTUS BOWLES.

Myddelton House, Waltham Cross.

VANDA WATSONII.

THIS pretty Vanda was introduced by Messrs. Sander and Sons of St. Albans, through their enterprising collector Micholitz, from the Annam district, where he found it growing at an altitude of 5,000 feet. It first flowered in the Glasnevin collection, and was named in compliment to Mr. W. Watson, the able Curator of the Royal Botanic Gardens, Kew. The illustration depicts a grand example bearing seven scapes of its chaste white flowers, which was shown at a recent meeting of the Royal Horticultural Society by Lieut.-Colonel Sir G. Holford of Westonbirt, Gloucestershire. It is a somewhat rare plant, and is nearly allied to the well-known *V. kimbaliiana*. S.



A WELL-GROWN PLANT OF VANDA WATSONII FROM LIEUTENANT-COLONEL SIR GEORGE HOLFORD'S GARDEN.

above the sheathing leaves they are pressed so closely together as to form a cone, the summit of which is this tough white point, an instrument admirably adapted for piercing a way through rough soil without receiving injury. Forbes Watson has much to say of the beauty these delicately-tinted light points add to the general effect of the narrow blue-green leaves—too much for me to quote here, so I will only remind my readers that his somewhat fanciful but withal faithful descriptions of the charms of our favourite spring flowers well repay an annual reading ("Flowers and Gardens," by Forbes Watson).

In the Crocus these hardened leaf-tips take the form of sharper points, and it is not now a matter of two outer ones facing each other to form a piercing point, but the tips of many leaves brought close together by the tightly-wrapping sheathing

THE ROSE GARDEN.

HOW AND WHEN TO GRAFT ROSES.

THERE are, I have no doubt, some readers of THE GARDEN who would like to try their hand at grafting Roses under glass. It is the method of propagation chiefly adopted by professional growers to increase their stock of new Roses, and the ardent amateur, should he desire to have a quantity of plants of any given new Rose, may soon obtain them by this method. For instance, supposing he admired a particular sort at the summer shows, and was unable to procure buds, a pot plant purchased now could be cut up into quite a number of grafts or scions (see Fig. 1), and by June he would have a dozen or two nice little plants to plant out or to grow on for forcing next winter.

The Stock (see Fig. 1) usually employed for Tea and Hybrid Tea Roses is the seedling Briar. Some growers, especially those in America, use the Manetti stock for the Catherine Mermet tribe, and others prefer it for the old Niphetos Rose, as it produces plants double the size of the Briar, and the blossoms are a purer white. The stocks are potted up into 3-inch pots by some propagators the year before, but others equally prefer to pot them up only a few weeks before using them. They should be fully as thick as an ordinary lead pencil, a little stouter, if possible. When potting, the

roots must be cut back rather severely and the tops shortened to a few inches. The graft is put on just above the roots as seen in (see Fig. 2). It is really the stem between the branches and the roots proper. It will, therefore, be seen that straight-stemmed Briars are essential.

The Scions or Grafts are best obtained from plants that have been grown under glass, the object being to obtain good, well-ripened wood; but after such a season as the last, many grafts could be obtained from outdoors. It is useless to put on pithy wood. If unable to get good wood at first, grow the plant on, and then green or herbaceous grafts are obtainable, *i.e.*, wood that has just flowered under glass. This wood, put upon stocks that are also in a growing state, usually succeeds well, and it is a method much used by nurserymen to increase their stock of new Roses. The first batch of grafts of a new Rose put on, say, at the end of December will by February be grown so much that their tops can be utilised for grafts. This is not at all conducive to a good, sturdy stock of plants, and it is owing to this practice that many new Roses become thoroughly weakened before they are grown by the amateur. It is a great pity, because such plants can never be of any use, and only tend to give the variety a bad name.

A Propagating-Frame is necessary where a good number are to be grafted. This should be placed in the warmest part of the greenhouse, in the centre, if possible, so that it is away from the outside walls. The lights should be tight fitting. Usually such a frame is arranged over the hot-water pipes, slates being used to form the bottom of the case, upon which Coconut fibre or ashes are placed. There must be a temperature of about eighty-three degrees to eighty-five degrees maintained day and night, and unless this is possible it will be useless to attempt the work of grafting. When about to carry out the operation of grafting, two nails are driven into a stout board and the small pot containing the stock laid between. The top of the stock is cut off, leaving just the collar above the soil. Cut up the grafts into lengths of about two inches and, if possible, containing two eyes or buds (see Fig. 1). Take the graft between the thumb and finger of the left hand and make a slanting cut of about three-quarters of an inch with a sharp knife (see Fig. 1). A similar cut is now made on the stock and the two joined together. They should fit perfectly on both sides, if possible; if not, then on one side. The graft must now be tied firmly on to the stock (see Fig. 2). Prior to grafting, the stocks should have been well watered, and will then need no water for some five or six days after being grafted.

After-Treatment.—The grafted stocks are placed in the propagating-frame as soon as grafted, and the frame kept quite close and shaded from bright sun by newspapers. After about the sixth day a little air is given for half-an-hour each day. This is done by putting a label of about an inch wide just under the glass light. Each morning the latter should be raised for a few minutes and the moisture wiped off. The plants must be looked over and watered where really necessary; but this is a very delicate operation and must be carefully carried out. No water should be allowed to go upon the grafted part, so that it is best to lift each plant out and water it when required. The amount of air given should be increased each day until the fourteenth day, when the light may be hooked up to the roof of the greenhouse. After about three weeks the little plants, which have now made growth an inch or more



2.—LEFT, STOCK OR BRIAR WITH TOP CUT OFF AND PREPARED TO RECEIVE SCION; RIGHT, SCION AND STOCK SPLICED TOGETHER OR GRAFTED.

in length, may be lifted out and put on the side staging where there is bottom-heat. Sprinkle the hot-water pipes in the morning to create a dew, and be very watchful that no plant suffers from lack of water. Allow them to have the full sunlight now. When the little white roots are seen emerging from the hole in the pot, the plants are ready to pot on, and may be placed into 5-inch pots. The compost should consist of two parts sifted loam, one part leaf-soil, one part well-decayed manure and a little sand. Pot firmly and keep the plants in a temperature of about fifty-five degrees by night. As the plants grow, give each one the support of a little stick, and stand them well isolated so that every leaf catches the light and air. Shift them on into larger pots if required for forcing next season; but if not, gradually harden off and plant outdoors in June.

It may be helpful to some amateurs if I state here that these potted-up Briars may be budded in July with any choice variety, and afterwards forced in growth the following spring. This plan is really simpler than grafting, and is a good one to adopt where one wishes to increase one's stock of a seedling Rose. The Briars for this purpose would be best potted up into "Long Toms," or 4-inch pots, during the winter, and then placed outdoors, plunging the pot in ashes. Keep them well looked after through spring and summer, so that they are kept growing. In July, when sap is flowing freely, insert buds in the "collar" (Fig. 1 d). The tops are, of course, kept on, but in January they are cut off down to the inserted bud, and the pots are then placed in a greenhouse with a temperature of about fifty-five degrees by night. The "buds" soon commence to push out, and by May fine little plants are obtained, which may either be potted on or planted outdoors. P.



1.—SEEDLING BRIAR AS DUG UP FROM NURSERY BED; ON RIGHT, SCIONS OR GRAFTS; ON LEFT, THE SAME PREPARED FOR UNITING TO BRIAR OR STOCK.

THE KITCHEN GARDEN.

ROOT CROPS.

BRIEF CULTURAL NOTES.

THE present season, the most important one in relation to root crops, affords me an opportunity of dealing with a few of the most valuable, which I hope may be of service to those who are not well conversant with the same.

Potatoes.—These I will deal with first, as they form the staple crop in most gardens, large or small; and though their culture is generally understood by many, I may be able to embody a few notes of value to some. Good drainage of the land is of primary importance, and unless this is present, subsequent treatment will prove of little avail. The situation should be an open one, where the crop will get the maximum amount of sun, and the ground should be free from the roots of large

rub a little, this will not matter. The varieties to grow are those that crop best, keep well and do well in the particular locality. Two general favourites, however, are Windsor Castle and Up-to-Date.

Parsnips.—This is a valuable winter crop and none more so when the Brassica family are scarce. There should be no delay in getting the seed of this crop sown. Avoid newly-manured ground, as this is conducive to scab and deformed roots. Before sowing, knock down the surface with a fork, and if some wood-ashes and soot are sprinkled on so much the better. Rake over with a wooden rake, removing rough stones, draw shallow drills 18 inches apart, sow the seed thinly, and finish by raking over the surface neatly. Tender and True, The Student and Hollow Crown are all excellent varieties.

Onions.—The main crop of these are best sown at the earliest possible date after the beginning of March, when the ground admits of treading,

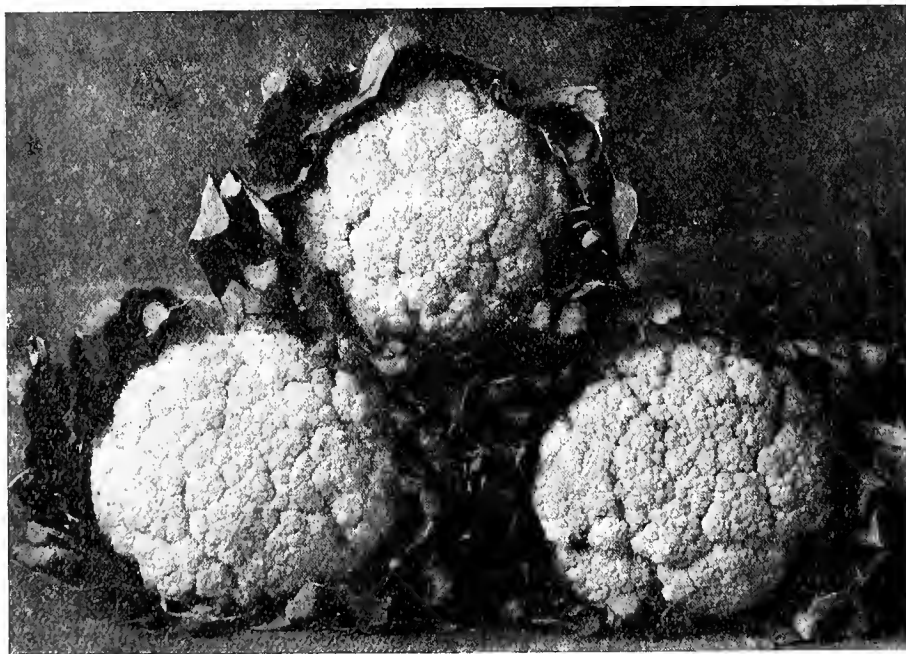
enriched and worked, and afterwards well trenched or dug. Prepare a good seed-bed by forking over, and at the same time work in a good sprinkling of lime rubble, wood-ashes and soot; especially valuable is this on heavy soils. Draw drills 18 inches apart and sow the seed evenly and moderately thickly. When the seedlings are well above ground, thin out to a foot or so apart, leaving the best, of course. When lifting the crop, care should be taken not to break the roots in any way, otherwise their quality will be impaired. The whole should be lifted when perfected and stored in fine ashes, soil or sand. Dell's Dark Red is an excellent variety, as is also Sutton's Blood Red. Globe or Turnip-rooted are generally grown for earlier supplies.

Carrots.—The main crop of this vegetable will need to be sown during the month of April when the soil is in good order. Earlier sowings may be made now at any time on a warm border of the quicker-maturing, stump-rooted varieties. For the main crop, however, for keeping, select an open site in the garden, fork over the ground as advised previously, and remove all rough stones, &c., with a wooden rake. Draw drills 12 inches to 15 inches apart, and sow thinly and evenly; thin finally to a distance of 9 inches apart. For obtaining specially good roots free from blemish for exhibition, where the natural conditions will not allow, special means must be adopted by boring holes and filling them with a fine sandy compost. New Red Intermediate is the best variety I know.

Turnips.—To obtain really good Turnips, they require growing as speedily as possible, and frequent small sowings should be made to maintain a supply of young roots. Sowings may be made at once on a warm border, drawing the drills 9 inches or 10 inches apart. Thin the young plants as early as possible, so that they do not become crowded, finally leaving them about nine inches apart. For late supplies sow in batches between the end of July and September. Dry weather is disastrous to the well-being of Turnips, and for summer supplies it is well to mulch the crop with short grass mowings or other suitable material, as well as selecting the shadiest position. Varieties are numerous. Early Red and White Milan are good for early supplies, Snowball and Jersey Lily for later sowings, while Red Globe is an excellent variety for summer supplies, and Pritzaker for the latest.

E. BECKETT, V.M.H.

(To be continued.)



A NEW DWARF CAULIFLOWER: BATH'S RELIABLE.

trees which only impoverish the soil. The land for Potatoes is best if turned up early in the winter and allowed to lie rough just prior to planting. The best soil is undoubtedly a good loamy one, not too heavy, and containing plenty of lime. Too much stress cannot be laid upon the importance of the seed, and I would strongly urge a change from a distant source, such as Ireland or Scotland, where it is possible to do so. The seed or sets should be laid out thinly in a light, airy structure where the sprouts will not become drawn. Planting will vary, according to the neighbourhood, from the middle of March to the end of April, but the earlier it can be carried out with safety the better. For planting I prefer to take out a deep drill, and, where the land is retentive, place the tubers evenly apart on decayed leaf-soil or strawy manure. Avoid planting too thickly, and as soon as the growths appear hoe the ground to keep weeds in check, and mould up the soil to the growths. Lift early is my motto—as soon as growth is completed—and though the skins may

as Onions like a firm ground. Assuming the land was well prepared by digging or trenching early, knock down the surface as advised for Parsnips, level with a wooden rake and well tread. Draw shallow drills 10 inches to 1 foot apart, and sow the seed evenly and not too thickly. Heel in the soil and tread the rows in the opposite direction, and finish off the surface neatly with an iron rake. For maincrop Onions sown in the open ground I do not advise severe thinning, as is sometimes practised, as a greater weight is secured and the bulbs are much better ripened, though, of course, they are not so large. Where large bulbs are needed, I prefer planting out young plants next month that have been raised under glass. For keeping, James' Long-Keeping and Sutton's Improved Reading are both excellent.

Beetroot.—It is a mistake to sow this crop too early. The end of April for the main crop will be soon enough. The ground should not contain too much green manure, it being a good plan to follow Celery, for which crop the soil was well

A NEW DWARF CAULIFLOWER.

Those who know and appreciate Autumn Giant Cauliflower will be interested to learn of a dwarf-growing variety possessing the same excellent properties. This is Bath's Reliable, an illustration of which is given on this page. It is being sent out this year by Messrs. R. H. Bath, Limited, The Floral Farms, Wisbech, and has, no doubt, a rosy future in store for it. This new Cauliflower is of much dwarfer habit than Autumn Giant, and may be planted considerably closer than that variety. It produces immense pure white heads, quite as large as, or larger than, those of Autumn Giant. It has this distinctive feature: that the leaves protect the flower as in the Self-protecting Broccoli. As the variety is in season during August and September, when the sun is frequently very hot, the advantage of protection of the flower from the sun's rays is very marked, as the flowers then are enabled to retain their whiteness for a considerable period.

GARDENING FOR BEGINNERS.

THE CULTIVATION OF THE HIPPEASTRUM.

MARCH is the month when the Hippeastrum, or, to give it the more common name in gardens, Amaryllis, should be repotted. Not all of the bulbs, however, will need repotting, for those which are large and well established, say, in 7-inch pots, will only require, to be top-dressed with a good fibrous loam mixed with leaf-mould and a sprinkling of bone-manure. The top-dressing or repotting should take place early in the month, just as the bulbs are showing signs of growth. Large bulbs should flower about a month after top-dressing, and it is usual for the flowers to appear in advance of the leaves. No hard-and-fast rule can, however, be laid down in regard to the time of flowering, as this is governed by the time of starting the bulbs into growth.

Repotting.—Those bulbs which have not yet reached the flowering stage should be taken out of their pots and all of the old soil shaken out from the roots; this may be done with the aid of a pointed stick. Care must be taken to avoid overpotting, and the bulbs should be kept about two-thirds above the soil-level. No pains must be spared to see that the soil is well filled in among the roots. Finally, the soil must be made firm, not simply on the surface, but throughout the pot, and this is done with the aid of a potting-stick or rammer. The potting compost should be similar to that recommended for top-dressing, with the addition of about one-tenth part of silver sand.

After Potting they should be plunged in tan, Cocoanut fibre or leaf-soil, over bottom-heat, in a temperature of about sixty-five degrees. A little shade will be necessary at first, also at the time of flowering; but later on the plants will revel in sun and air. Throughout the growing season—that is, from now till September—the plants require syringing, and a fair supply of water at the roots, after which they should be rested in their pots, (not dried right off) until the following February or March, when they are once again started into growth. An abundance of air must be given in the summer, when both top and bottom ventilators may be left wide open in hot weather. This will enable the bulbs to become well ripened, which is a great advantage.

Propagation is effected by offsets and seeds. The former operation is carried out when the bulbs are resting. In Fig. 2 is seen an old bulb with numerous small ones, or offsets, surrounding it. These may be removed now, at the time of top-dressing or potting. The offsets should be potted singly in small pots, and grown on as already recommended. The flowers of the offsets are, of course, identical with those of the parent bulb, and named varieties are always increased by this method. Seeds of first-class strains may be had from a shilling a packet upwards, and although it may mean waiting two years before the first flowers, the results will more than justify the time spent in growing the seedlings to the flowering stage. In

Fig. 1 is seen a seedling in full flower. It will be observed that the anthers and stigma are very prominent; for this reason it is an easy flower to manipulate—that is, for those who would like to cross-fertilise and raise their own seedlings. Such work is intensely interesting, and there is always the glorious uncertainty that something special may turn up in the seedlings. The seed should be sown as soon as ripe in well-drained pans filled with sandy loam. A temperature of 65° is best for germination, and the seed-pans should be kept shaded until the seedlings are better able to take care of themselves. Pot them up as soon as they are large enough to handle, and grow them as recommended for the older bulbs, with the difference that they should not be dried off in the first winter, but be kept growing all the time. The young plants will then make rapid progress. SPARTAN.

HOW TO TREAT FORCED BULBS.

IN many instances the bulbs that have been forced in pots, pans or boxes are discarded when the flowers have been cut or have faded. It is a waste of really good material. We cannot expect

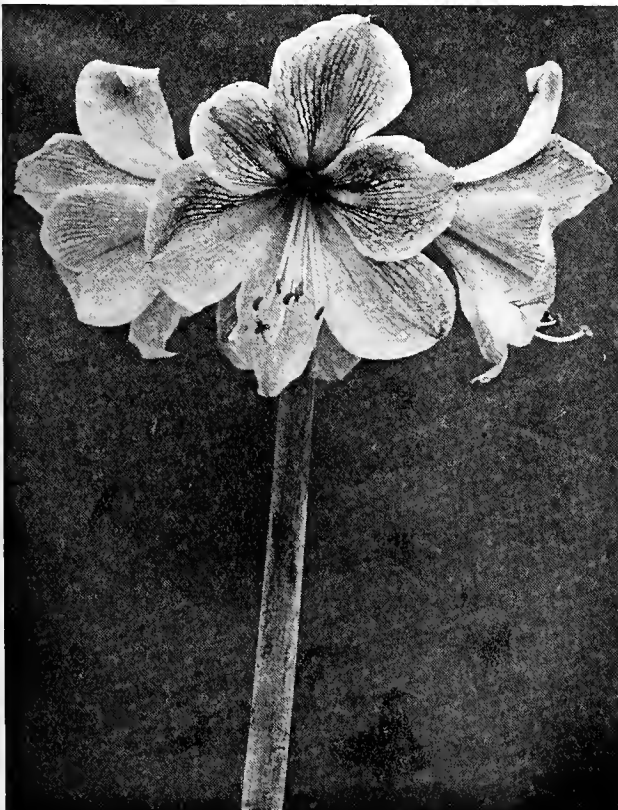


2.—PARENT BULB WITH OFFSETS. THE LATTER ARE READY TO BE REMOVED AND POTTED UP.

the bulbs to produce such fine flowers a second year; but strong bulbs, well matured, invariably grow and flower freely for many years after they have been subjected to a forcing temperature. Undoubtedly the great heat of last summer ripened many thousands of English-grown bulbs very well, and now they are throwing up strong flower-stems again in the open borders. Directly the flowers have faded or been gathered, place the pots containing the plants in a frame with a sunny aspect. Gradually diminish the water supply. In June or early in July plant out the bulbs in the borders. Roman and named Hyacinths, Narcissi, Tulips and Jonquils are the best to plant in odd borders or in shrubberies where it will be possible to leave the bulbs undisturbed for a number of years. B.

PLANTS TO PROPAGATE ON HOT-BEDS.

A FRAME placed on a hot-bed at this season of the year is a very valuable asset in any garden, especially where the propagation of bedding-out and greenhouse plants is necessary. If a new hot-bed be built, some litter should be put in after the frame has been placed in position, so as to raise the cuttings nearer the glass when inserted. A layer of Cocoanut fibre 4 inches deep should be put on the litter, and the pots and boxes containing the cuttings plunged in it, so as to ensure an even temperature around the base of every cutting. The outer portion of such a bed is the coolest, and there the Zonal Pelargoniums must be put. Next to them insert Ageratum, Fuchsias and Heliotrope, and in the centre Coleuses, Iresines, Mesembryanthemums and the Lemon-scented Verbena. For the Pelargoniums the chief ingredient in the compost should be good loam; for the other kinds, loam and leaf-soil in equal proportions. Of course, sand must be freely added to the mixtures. AVON.



1.—SEEDLING HIPPEASTRUM IN FLOWER, TWO YEARS FROM THE TIME OF SOWING THE SEED.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Plant-Houses.

Gloriosa superba.—Now is the time to pot the tubers of this showy warm-house climber. Use a rich compost and pots sufficiently large to accommodate them through the season. Water very sparingly until growth is active.

Ivy-Leaved Pelargoniums make fine subjects as climbing plants in the greenhouse. This is a good time to repot or top-dress. At the same time thin out and regulate the growth.

Bougainvilleas.—Few greenhouse climbers are more effective. If treated as stove plants, too much growth is made at the expense of flower. Now that growth is beginning, prune back last year's wood, which will induce the plant to bloom profusely.

Swainsona galegifolia alba is a fine plant for training up the rafters, and almost continuous blooming. Assist the plants with properly-diluted farmyard manure. *Cassia corymbosa*, *Plumbago capensis* and *Streptosolen Jamesonii* are likewise easily restricted to a small area.

Caladiums.—These will need starting without delay in a warm structure. The small-leaved varieties, *C. Argyrites* and *C. minus erubescens*, are splendid for the front of the stage, and are best grown in 3-inch pots. The larger-leaved varieties are best started into growth in small pots, and then repotted when roots are active. Maintain a humid atmosphere and avoid over-watering.

The Kitchen Garden.

Turnips.—A small sowing may now be made on a south border on ground that has been well prepared. Make a good tilth by knocking over with a fork, afterwards raking down. Draw shallow drills 10 inches apart.

Carrots.—Sow seeds of an early-maturing, stump-rooted variety in a similar manner.

Onions.—The main crop may be sown now. The ground should have been left in as rough a state as possible since digging or trenching, and now will need forking over. If some wood-ashes and soot are incorporated, so much the better. An Onion-bed must be firm, and consequently the ground must be sufficiently dry to admit of treading. Draw shallow drills 10 inches to 12 inches apart, and sow the seed thinly and evenly.

Peas.—The earliest sowings that were made in pots will shortly be ready for planting out, so thoroughly harden off before doing so. Avoid planting too thickly, and draw a little soil up to the plants. Stake as early as possible, according to the height of the variety. A few Spruce boughs placed beside the rows will be found a great protection for a few weeks.

Potatoes.—In favoured positions the earliest plantings may be made out of doors, such as between the earliest rows of Peas or under a warm fence or wall. The sets for the maincrop varieties should be laid out thinly in a light, airy structure, so that the growths do not become drawn and thin. A change of seed is to be recommended from a distant locality. Both Scotch and Irish grown are excellent.

The Flower Garden.

Pansies and Violas.—Sow thinly in well-drained pans or other receptacles and stand in a cold frame, preferably on a mild hot-bed.

The Rock Garden.—This will shortly need a thorough cleansing, weeds and other refuse removed, the soil lightly forked up and a top-dressing of fine soil given. Plants that have been wintered in cold frames, plunged to the rims of the pots and not coddled in any way, may now be planted out in their permanent quarters.

Slugs.—These soon do an immense amount of harm if allowed to go unchecked. Pieces of Carrot or Turnip, or leaves of Cabbage or Savoy, placed about will often be found harbouring them, and bran will disclose their tracks. An excellent plan is to search for them at night, when feeding, with a good light.

Hoeing.—This is very important, and whenever the ground admits of the Dutch hoe being run through the soil, this should be taken advantage

of, as it not only keeps weed-growth in check, but aerates the soil and proves beneficial.

Hints on Orchids.

Calanthe Veitchii.—Now that the flowers are past, the plants should be allowed to rest in a warm house; lay the pots on their sides so that no water can reach the roots.

Cypripediums.—The potting of these popular subjects is generally best performed soon after the flowers are past. If the plants are too large, divide them and pot into smaller receptacles. The compost consists chiefly of fibrous peat, sphagnum moss, a little fibrous loam, finely-broken potsherds and silver sand. Water sparingly after potting, but keep the surroundings moist and warm.

Odontoglossums.—Support the spikes with a thin, neat stake as they are being formed. It is a good plan to tie a tuft of cotton-wool at the base to prevent insects approaching the flowers.

Hardy Fruits.

Strawberries.—The ground between these, especially if of a retentive nature, should be lightly forked up, and a thin dressing of well-decayed farmyard manure placed over it.

Early Flowers.—In warm, sheltered positions, early Peaches and Apricots will soon be showing colour, and a slight protection will prove advantageous, if only a thickness or two of old fish-netting.

Fruits Under Glass.

Figs.—Early-forced trees, whether permanently planted or in pots, will require attention to the growths. Excepting the leading growths required for extension, the first opportunity should be taken of stopping the young growths at the fourth or fifth leaf, to induce the formation of fruit. Keep a night temperature of from 55° to 60°, according to the weather. Syringe twice daily whenever the weather permits, and close the house early in the afternoon.

Melons.—Encourage the growth of these by maintaining sufficient heat and keeping the surroundings moist and the plants syringed. Where the single cordon method is adopted, allow the plant to continue its lead uninterrupted, removing any side growths until the trellis is reached. Avoid wetting the stem of the plant when watering, which is apt to accelerate canker.

Orchard-House.—The trees in this house, until the flowering stage is reached, should be allowed to come on quite naturally. Admit plenty of air on all favourable occasions. Syringe the trees when not in flower, always early enough to permit of them becoming dry before nightfall. Water carefully, and though the plants must not be allowed to become dust dry, the reverse is just as detrimental.

E. BECKETT, V.M.H.
Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Plant-Houses.

Calceolaria Burbidgei.—Put in cuttings now. They strike freely in a hot frame and provide useful plants for flowering in winter.

Adiantum cuneatum starting into growth should have rusty fronds removed and be repotted into larger pots if desired. Those in large pots should have a portion of the old soil removed and be returned to the same pots.

Hippeastrums are now pushing their flower-spikes, and those not repotted will require a fair supply of water. Repotted bulbs, on the contrary, will require little water at the roots. Last year's seedlings should have a further shift. Usually 4-inch pots are suitable.

Show Pelargoniums now in 5-inch pots should be shifted on into 7-inch ones. They are easy to cultivate, but must have perfect drainage and a compost of rotted turf, leaf-soil and sand. Water carefully till re-established, and fumigate for aphids as soon as it is noticed. Weak growths should be removed.

The Fruit-Houses.

Vineries.—Keep the Late Hamburgh and Lady Downe's vineries cool and airy. Vines started in November will have bunches ready to thin

which should be done without delay. The Muscat house will now require the temperature raised to 55° or 60° at night and 10° higher by day.

Melons sown six weeks ago should now be transplanted into narrow and not deep beds of turfy soil. Keep up the stems to avoid canker.

Tomato Seeds.—Sow a large batch to produce plants for planting in pits freed from their occupants in May. Supreme is a good sort, but there are many equally desirable.

The Flower Garden.

Roses.—Prune the hardier climbing sorts growing on trellises. See that all kinds of climbers on walls are securely fastened and those pruned that need it.

Ventilate Frames freely in which rooted cuttings of the hardier flowers are growing. In fine weather the sashes should be removed altogether. Plant out young specimens of *Anthemis tinctoria* and its varieties. It gives a brilliant effect in large masses grouped near the front of a mixed flower border, and associates well with Lavender.

Galtonia candicans.—A batch of this should be planted. It is, unfortunately, subject to bulb disease, and it is worth while to isolate each bulb in a mass of sharp sand as a possible preventive. Plant 4 inches to 5 inches below the surface.

Dahlias.—Start old tubers in not too high a temperature to produce growths for cuttings. Leaf-soil and Cocoanut fibre are good materials to lay the tubers in. Both are easily kept moist with constant watering. Do not use the earliest growths, but cut them over, and the next and succeeding growths should be utilised.

Bedding Plants.—Tips of *Lobelias*, *Verbenas*, *Heliotropes*, &c., inserted in boxes of light soil, covered with glass and stood in a house with a high temperature, root in a very short time. I usually arrange these so that they stand in the same boxes till required for the flower garden. *Salvia splendens*, *Ageratum* and coarse-growing kinds are rooted in sand in a hot frame and transferred to boxes when well rooted. Place *Chrysanthemums* and *Lobelia cardinalis* in warmth to make growth.

The Vegetable Garden.

Lettuce, Radish and Spinach.—Sow these now, the last-named in sufficient quantity to give daily pickings.

Second-Early Peas.—Sow a good breadth of these in rather shallow drills and thicker than at a later date. Mound up the drills to give depth.

Peas in Boxes.—The earliest Peas are late on account of the weather, and where these are essential, seeds sown thickly in cutting-boxes, germinated in heat and grown on in a cool structure to be transplanted out of doors, will come in early enough.

Cucumbers.—The earliest should now be growing fairly freely, and will ask for renewed dressings of rough turf and rotted manure at brief intervals. Heat and moisture are essential.

Brussels Sprouts and Autumn Giant Cauliflowers sown now in prepared beds in a cold frame, which should be kept quite close till the seedlings appear, provide capital plants for setting out at the end of May.

Vacant Ground that was dug or trenched in autumn, but not manured, provided manure is required, should be dressed with partially-rotted farmyard manure and the latter dug in without delay, smashing all rough clods at the same time.

The Hardy Fruit Garden.

Gooseberries.—Watch that birds do not eat the buds of these.

The Fruit-Store.—See that no fruit is left to decay in the fruit-store. Apples have matured earlier than usual this year.

Espalier Trees and those on covered walks should be tied to the wire, and the surface over the roots made neat and tidy. If surface-dressed in autumn, the remains of the manure may now be removed.

Strawberries.—One and two year old Strawberry-beds may be benefited by manual surface-dressings; but in strong, holding soil these in general are not required. Hoe all the bare ground deeply when the surface is dry and friable, and make the outer edges of the beds trim and neat.

R. P. BROTHERSTON.
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NEW AND RARE PLANTS.

AWARDS OF MERIT.

Ribes laurifolium.—We were impressed more by the distinctness of this new Chinese species rather than by its present promise of any garden merit or value, its greenish white flowers rendering it anything but a plant of the decorative order. Of what value it might presently prove to the cross-breeder and raiser of new plants remains to be seen. For the moment it appears to be a plant of botanical interest only. Exhibited by the Hon. Vicary Gibbs, Elstree.

Carnation Lady Meyer.—The high merit and excellence of this handsome pink-flowered Carnation has at last received recognition, and, if tardily, no variety has, we think, obtained it more worthily. Briefly described, it is a greatly-improved Enchantress, a flower of somewhat deeper colouring, and minus the hard-cored incurving centre of the old variety, which causes it to respond slowly in sunless weather. Lady Meyer, on the contrary, has fewer central petals, and these, being more uniform, respond more readily. It has been exhibited on several occasions during the worst of the winter season, and the fact speaks volumes in its behalf. Strength and length of stem are among its good attributes. Exhibited by Mr. E. Guile, Newport, Essex, and by Messrs. William Cutbush and Sons, Highgate, N.

Cattleya Brenda.—A very taking Cattleya with a beautiful fimbriated lip. The petals are nicely waved, and rosy pink is the dominating colour. Parentage: *C. Dusseldorffii* × *C. gaskelliana*. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

Odontoglossum Vulcan crawshayanum.—A really charming variety with reddish brown flowers barred and tipped lemon yellow. The flower-spike was very strong and carried eleven fine flowers. Parentage: *Odontoglossum crispum* × *Odontioda Vnylstekei*. Shown by de B. Crawshay, Esq.

Calanthe Bruno Schroder albiflora.—A much-improved variety with larger flowers than the type. Shown by Baron Bruno Schröder.

NEW FRUIT.

Apple Oatlands Seedling.—A good late dessert variety of medium size and coloured on the sunny side. It partakes of the flavour of Cox's Orange Pippin. The flesh is firm and juicy. Parentage: Cox's Orange Pippin × Sturmer Pippin. Shown by Mr. F. G. Gerrish, Pendley Manor Gardens, Tring.

HARDY PERENNIALS FROM SEEDS.

JUDGED by the frequent enquiries which come to hand, there would appear to be to-day a far greater desire than formerly to raise the best hardy perennials from seeds. At no time in the history of hardy plant gardening have seedsmen in general paid so much attention to this particular branch, and not only are the best-known seed-houses affording increased facilities to purchasers, but new sources of supply are opening up on every hand. This is but the natural outcome of an increased demand, the amateur having realised somewhat of the wealth of beauty and variety such gardening affords. Hence the raising of perennial plants from seeds is calculated to be far

more popular in the future than it has been in the past, and where permanent beds or groups are the object in view, nothing can surpass the system we have in mind. A single plant of this or that may cost sixpence, or even twice that sum, while a packet of seeds, even if of equal cost, which is only rarely the case, may yield two or even three dozen plants. To take, for example, so useful a subject as the long-spurred hybrid Columbine, than which no flowering perennial has a more elegant or distinctive grace, we see at once the value of dozens of plants in beds or borders, a value which is only equalled by the utility of the flowers in the decoration of the home or their importance in the exhibition arena. Moreover, the plant so raised, if grown in well-cultivated soil, will give of its best for years, a "best" whose productiveness is increased in proportion to the care and intelligence bestowed in its cultivation.

In like manner the Gaillardia, Hollyhock, Larkspur and Coreopsis, among many others, are each amenable to similar treatment, and alike valuable from the decorative point of view. What is most necessary to impress upon the amateur or beginner in gardening who undertakes such work is the need of starting in season and in reason, and of possessing his soul in patience until such times as a first flowering is secured. That energetic individual should remember, too, that a plant of perennial duration does not often attain to the flowering stage in the first year, and that, should a flowering ensue, it should not be regarded as characteristic of the flower or representative of the group to which it belongs. It is quite true, however, that seeds of the perennial Larkspur, among others, may be sown in gentle warmth in January and February, and pushed along with all speed and planted out in May in deeply and richly cultivated soils to give a flowering during the late summer or early autumn ensuing. The fact is interesting rather as the result of intensive cultivation, though it is not general or reliable in all seasons or localities alike.

At the most, then, such flowering in a perennial should be regarded as precocious, the seedling being none other than the child of the parent plant. There is, however, a distinctive gain to the plant thus early set in its permanent home, for by the ample scope afforded for development it will have garnered to itself a strength of crown and rootstock immeasurably superior to that of the seedling which has been permitted to dawdle away its earliest days or weeks minus the attention so requisite to its needs. The moral, therefore, will be obvious to all.

In conjunction with early sowing there must of necessity follow timely transplanting, and if in due season the plant be got into its permanent abode, the cultivator will at least have the satisfaction of knowing that he has played his part. Such work, indeed, is fundamental, an essential that cannot be ignored with impunity. The most successful cultivators or exhibitors of this or any other time are the greatest sticklers for cultural details, and, apart from their mastery of these, they adopt the inexorable rule of never putting off till to-morrow work that should have been done to-day. Naturally, the amateur will say, "How impossible for me to emulate this clockwork precision and regularity," and this, indeed, may be true. At the same time, it might conceivably be his ambition, a goal he is ever endeavouring to reach. This and the ever-present knowledge of the importance of doing the right thing at the right moment will, if he be a true flower-lover, spur him on to further effort in the direction indicated.

To say that seeds of all perennials should be thinly sown and, so far as under glass cultivation is concerned, lightly covered is but to repeat what has been said hundreds of times before. Seeds of the Larkspur, for example, are large enough to admit of handling singly, and where this is not the case, a thin distribution of them is very important. Light-weight seeds, as Statice, certain species of Anemone and Gaillardia, may be covered more deeply than seeds of the weight and character of the Columbine or Lychnis, while seeds of the largest size, as Peony, Perennial Pea, Iris, or others like Phlox, Christmas Rose, Adonis or Hepatica, which remain for a couple of years without signs of vegetating, may be covered fully half an inch deep and will be further benefited by a protective board or slate covering meanwhile, in order to stay evaporation and prevent the undue souring of the soil.

On the other hand, seeds of a minute character will require but little, if any, soil covering, and these are they that test the skill of the seedling-raiser most of all. For all such the most careful watering is necessary; better, indeed, that watering as usually understood be dispensed with and that the seed-pot be partly immersed in water for a few minutes now and again in lieu. Not a few species and varieties of Campanula appear to dislike a deep soil covering, and the finest of sandy soils only should be used. Soils, too, for seed-sowing should be free of manure, and are best if baked or heated to an extent calculated to destroy all insect-life. Above all, the amateur should remember that there is no necessity to empty the entire contents of a packet of seeds in a single pot. Far better that a part be sown and the remainder reserved for sowing in the open ground in favourable weather in March.

The following are some of the more important groups easily raised from seeds: Achillea, Aster, Anchusa, Anemone, Aquilegia, Aubrietia, Campanula, Chelone, Coreopsis, Coronilla, Delphinium, Dracocephalum, Echinops, Eryngium, Gaillardia, Galega, Geum, Heuchera, Iberis, Chrysanthemum, Leucanthemum, Monarda, Lupine, Lychnis, Polemonium, Scabiosa, Papaver, Primula, Pentstemon, Silene, Statice and Zauschneria, and there are many others.

E. H. JENKINS.

CLIMBING ANNUALS FOR ARCHES.

MANY amateur gardeners make up their minds to erect light arches over paths and in other places in the spring, so that they can train the shoots of annual climbers over them. The plants are easily raised from seeds, and look very charming when in full blossom on the arches. Some of the half-hardy annuals, if carefully prepared, are splendid for the purpose.

I will not deal with each kind in detail, as it would take up too much space, but will give a few hints on the raising of both the half-hardy and the hardy kinds. Seeds of the former must be sown early in March—during the first half of the month—either in pots or boxes. I favour pots, because most of the plants are deep-rooting, and in pots they have more space. Use a compost of the following: Loam, two parts; leaf-soil, one part; and sand, one part. The seed-vessels may be placed in a cool or moderately-heated greenhouse.

or on a hotbed in a frame. The pots may be covered with squares of glass, but not with paper or moss in addition. Nothing must be done to weaken the seedlings, and the glass should be removed as soon as the seedlings are up. Admit air also when the weather is mild. Transplant the seedlings in pots, not shallow boxes, and then transfer them singly to small pots, from which they may be turned out and planted in their flowering quarters.

The hardy kinds should be sown at the end of March, or not later than the first week in April, if the plants are to be raised in cool frames or in pots. Those raised in their flowering quarters need not be dealt with until the middle of April, as care must be taken not to give them a check, and in cold soil they would receive this. As regards compost and potting, treat the hardy kinds as advised in the case of the half-hardy sorts. Some good loam and a quantity of rotted manure must be put in the positions where the plants are to grow and flower, except in the case of the Nasturtiums, and these will do quite well in ordinary unmanured garden soil.

Half-hardy kinds: *Ipomœa coccinea*, *I. hederacea superba*, *I. Quamoclit*, *Mina lobata*, *Scyphanthus elegans*, *Thunbergia alata*, *T. alba*, *T. aurantiaca* and *T. coccinea*.

Hardy kinds: Sweet Peas, of course, may be largely grown, and seeds or plants of these should be put in any time in spring in pots or in the open border where the plants are to flower; *Nasturtiums*, mixed colours; *Humulus japonica* and *H. j. variegata*, and *Convolvulus* (*Morning Glory*), mixed. AVON.

GREENHOUSE FLOWERS FROM SEEDS.

A GREAT many of the flowering plants that we depend upon for the embellishment of the greenhouse or conservatory are raised from seeds sown at some season or other. Well-known examples of these are *Primulas*, *Cinerarias*, *Cyclamen*, *Calceolarias*, *Begonias*, and *Streptocarpus*. It is, however, not my intention to deal further with these, as articles about them have already appeared in *THE GARDEN* this year, but rather to refer to the many different subjects, mostly plants of annual duration, of which seed may be sown now and the resultant plants will yield a display in the greenhouse during the forthcoming summer and autumn. Most of them will grow out of doors during the summer, but they are on that account none the less valuable for greenhouse decoration. Among the best are

Asters.—These are more commonly regarded as subjects for the furnishing of outdoor beds during the summer than for greenhouse decoration. Still, they are exceedingly useful for this purpose, and keep up a good display over a lengthened period.

Alonsoa Warszewiczii compacta.—This does remarkably well in pots, and produces its bright red flowers in great profusion.

Balsams.—These were great favourites with our forefathers, and now, after being under a cloud for many years, show signs of a return to popularity. The main essential in the successful culture of Balsams is to take care that the plants are never allowed to get stunted during their earlier stages. Some of the perennial species do well when treated

as annuals, notably the vermilion-coloured *Impatiens Holstii* and the carmine rose tinted *I. Sultanii*.

Browallia elata.—A pretty free-flowering annual, about a foot high, whose flowers are bright blue with a white centre.

Celosia pyramidalis.—The plumose flowers of this plant are remarkable for their vivid colours. It is well known both for flower garden and indoor decoration, and its relative the Cockscomb always attracts attention, particularly in the greenhouse, where its distinctive features are brought close to the eye.

Clarkias.—Of late years Clarkias have become more popular than ever, and their value for pot culture has been well exemplified during the last two or three Temple Shows, where the improved forms of *Clarkia elegans*, namely, *Scarlet Beauty*, *Delicate Pink* and *Firefly*, have formed quite a notable feature of Messrs. Sutton's exhibit. The orange-coloured, Daisy-like flowers of this comparatively new plant are always admired, whether indoors or out.

Godetias.—If grown in pots, given frequent doses of liquid manure and care is taken to keep the seed-pods picked off as they form, the Godetias are a very valuable race of plants for this purpose, their flowering season being spread over a lengthened period.

Lobelia tenuior.—This striking Lobelia has of late years become quite a favourite for pot culture, under which conditions it is remarkably showy. It is also a first-rate basket plant.

Mignonette.—The delicious fragrance of the blossoms is pleasing to everyone, for which reason Mignonette is appreciated at all seasons of the year.

Nemesia.—Very few annuals have made such rapid headway in popular favour as these, the flowers being bright and effective and the colours varied. The merits of the dwarf forms *Blue Gem* and *White Gem* must on no account be passed over.

Nicotiana.—The different *Nicotiana* hybrids are exceedingly valuable for greenhouse decoration, especially those with flowers of a clear decided tint.

Petunias.—These are not annuals, but seed sown in the spring will yield plants that will flower throughout the greater part of the summer and well on into the autumn.

Rhodanthe Manglesii.—Both the white and rose varieties of this are among the finest of everlasting flowers, as if they are cut before they fully expand and are hung up to dry, they will keep during the winter.

Schizanthus.—The very fine specimens of these that one often meets with are from seed sown in the autumn, but seed sown now will give flowering examples for the latter part of the summer.

Statice Suworowii.—The pretty pink flowers of this *Statice*, disposed in strange-looking spikes, appeal not only for their beauty, but also for their novel appearance.

Stocks.—These are general favourites, and, like Mignonette, their fragrance appeals to everyone.

Thunbergia alata.—A pretty trailer with trumpet-shaped flowers of a buff colour with a dark eye. In *aurantiaca* the blossoms are bright orange.

Torenia.—These are exceedingly pretty greenhouse annuals, more delicate in constitution than most of those above enumerated. In *Torenia Fournieri* the flowers are purple and white, and in *T. Baillonii* they are yellow and purple.

Seeds of all these flowers should be sown very thinly in well-drained pots 5 inches to 7 inches in diameter. Use good soil composed of loam two parts, leaf-soil and decayed manure half a part each, with a dash of coarse sand. From three to five seedlings will be sufficient to have in each pot, and it is essential that they be grown in quite a cool greenhouse or frame and be kept near the glass. H. P.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SWEET PEA CLUMPS (*Burton*).—We should allow 5 feet from centre of the clumps as a minimum, and if we could afford the space to give 1 foot more, we should do so.

LAYING OUT A GARDEN (*Miss F. C.*).—Between your proposed house and your bush Plums we should advise you to make a lawn with, if there is room, a Rose bed or beds in the angle formed by the house. We should move the two bush Plums and form the rock and water garden on each side of the entrance to the fruit garden, having rock and water garden combined. Along the line of the hedge separating your orchard from the pleasure garden we would suggest a shrubbery about eight feet wide, planting it with such subjects as *Forsythia suspensa*, *Spiræa arguta*, *S. canescens*, *S. japonica* variety *Anthony Waterer*, *Daphne Mezereum*, *Hamelis mollis*, *H. arborea*, *Lilæa Marie Legraye*, *alba grandiflora*, *Charles X.*, and *Souvenir de L. Spath*, *Ribes sanguineum*, *Philadelphus Lemoinei*, *P. cornarius*, *Diervilla Eva Rathke*, *D. Abel Carrière*, *Viburnum plicatum*, *Eleagnus pungens* var. *Simonii*, *Ligustrum japonicum*, *Berberis stenophylla*, *B. Darwinii*, *Hypericum hookerianum*, *H. moserianum* and *Magnolia stellata*. Here and there trees such as *Prunus serrulata* *James H. Veitch*, *P. Avium* fl.-pl., *Almond*, double-flowered *Peach* and *Laburnum alpinum* might be introduced. Between the gate and the house we recommend Rose-beds, and along the fence a few small-growing trees, such as double-flowered *Thorax* and *Laburnums*. If there is room along the boarded fence, it would be a good plan to repeat the shrubbery on account of shelter.

REMOVING VARIOUS PLANTS (*K. A. W.*).—April is a very late time to transplant Roses. We should prefer to move them at once and plant them temporarily on a vacant piece of ground until next autumn. Another plan would be to pot them now and replant as soon as your new garden is ready. In either case we should recommend you to leave the pruning as late as possible, say, the end of March; then the buds near the bottom of the stems will be dormant until early April. Nothing would be gained by lifting the plants now and laying them in until April. A south or south-west aspect would suit Hybrid Teas very well. You may plant Lilies of the Valley deep enough to allow of from 1 inch to 2 inches of soil being placed over the crowns. You may safely transplant your *Magnolia grandiflora* in April, providing you exercise care over the operation. Tie the branches together; then make a trench about the roots, fork the soil away carefully from the outer roots, undermine the ball, and lift the plant by means of forks placed below the ball on to a mat. Stitch the mat tightly about the roots and remove the plant to the new position with as little delay as possible. Prepare the hole, then lift the plant carefully in, spread the roots out to their full extent, and fill in among them with a mixture of sandy loam and peat. Water well and keep the leaves syringed for a few weeks. *Madonna* Lilies will be likely to suffer severely if transplanted in April. You might manage to move them during the first week in March if you can lift them carefully in clumps so as to keep the majority of the roots whole; then replant them as soon as possible in their new position. Another plan would be to arrange to leave the bulbs for the summer and have a supply sent you in early autumn.

THE GARDEN.

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MARCH 9, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Glory of the Snow.—The prettiest member of the Chionodoxa family is, we think, the little gem known as *C. sardensis*, which is considered by some to be a variety of *C. Luciliae*. The intense blue of its flowers, which is surpassed only by that of the *Gentian*, is more than welcome at this season, and contrasts well with the paler colour of *C. Luciliae*, which is, of course, much better known. Not the least interesting feature of *C. sardensis* is its cinnamon red flower-stems. It is easily cultivated, and multiplies freely by means of seeds.

Wistaria chinensis for Forcing.—Few shrubs better repay the care and attention of those who are responsible for keeping a greenhouse gay with flowers during early spring than this well-known climbing plant, for it forces easily, gives little trouble, may be used for several successive years without rest, and can be relied on to bloom freely. To succeed with it, however, it is necessary to rely strictly upon pot culture, and so induce sturdy, stunted growth in the nature of spurs, rather than the long, trailing branches peculiar to the species when growing freely, for the maximum number of inflorescences can only be obtained from short-jointed, stunted wood; moreover, plants with long, trailing branches would be less suitable for indoor work. Placed in well-drained pots 8 inches or 10 inches across, in really good loamy soil, they will go on with feeding for five or six years; then, if necessary, a year in the nursery prepares them for a further period; in some cases, however, re-potting suffices. The long racemes of fragrant lilac flowers are popular with everyone, and arranged with green foliage plants a simple and charming effect is produced.

Two Early-flowering Plums.—*Prunus cerasifera* and the Japanese *P. triflora* are the two earliest of the Plums to blossom, *P. cerasifera* being a few days the earlier this year, although such is not always the case. *P. cerasifera* is an old garden tree, although really fine specimens are not very common. Some doubt exists as to its natural habitat, though it is considered to be the region of the Caucasus. It is, however, common throughout Southern Europe, and is grown in quantity in France for the sake of its red Cherry-like fruits, which are imported into this country in July under the name of Cherry-Plums. Crops of fruit are sometimes matured in English gardens, though, possibly on account of early flowering, no regular crop can be expected, and the trees are grown solely for the decorative effect of their white flowers, which appear with the greatest freedom. The best position for this tree is in a place where it can have a background of evergreen foliage, for the effect of the blossoms is lost when the trees are growing in the open ground. In addition

to the type, the purple-leaved variety is also effective at this period, while the closely-allied *P. divaricata* is rarely more than a week or ten days later. The latter tree, though in many ways similar, bears yellow fruits. *P. cerasifera* was in full flower during the last days of February. Usually it is two or three weeks later.

Artemisia lactiflora.—This is a strong-growing perennial, reaching from 4 feet to 6 feet high if given a somewhat moist position. Although this is not absolutely necessary, a dry border must be avoided, or the full beauty of the plant cannot be realised. The lobed foliage is very elegant, and the terminal panicles of milk white flowers make a pleasing contrast among other occupants of the herbaceous border. It is now fairly plentiful, and should prove a valuable plant for all gardens; while if space could be provided, a large batch ought to be cultivated, for under such conditions it is seen at its best.

Primula malacoides.—One of the present-day signs—it is unmistakable and invariable—of an approaching popularity in the case of any plant that promises to be general or universal is that it be the subject of specialisation by market-men, and this is exactly what is taking place with the above-named delightful *Primula*. Free and easy of growth, abundant and profuse in its flowering and seeding, and of that delightful lilac mauve tone which is sure to please the ladies, it is small wonder that this comparatively recent novelty has so quickly caught on, and just as quickly found its way from market nursery to West End drawing-rooms through the usual channels of market and florists' shops.

Bamboos for House Decoration.—Private growers might well follow the example of those who have frequently to supply plants of various kinds for the decoration of the interior of municipal and other public buildings, and grow a considerable number of Bamboos for the purpose. They are easily cultivated, and stand well for some time in the house if attended to with water. They are specially valuable for corridors and halls, where their handsome foliage looks cool and pleasant. They also form charming backgrounds to flowering plants. They are largely employed, for example, in Glasgow, where a great number of municipal functions take place, and where the Bamboos come in very well either grown in pots or in tubs. They give little trouble after being used, and can be cultivated in the winter gardens or other glass structures suited to plants such as this, which does not require heat. Without distinguishing between the true Bamboos and the *Arundinarias* and other genera so closely allied, one may say that *Bambusa Métake*, *Henonis*, *palmata*, *nigra*, *aurea* and *flexuosa* may all be named as good for the purpose and as affording a satisfactory variety.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Daffodil pallidus præcox.—I do wish this dear little Daffodil had a more pleasing name. I planted some last autumn in my front garden, and one morning last week was rewarded by hearing a little child's voice exclaiming in a tone of rapture (which would have gone to the heart of the Rev. J. Jacob), "Oh, look! Daffodils!" A cruel elder answered, "Them ain't Daffs; Daffs is yellar." But the child bravely persisted, "They *are* Daffodils, and they're a sort o' yellar," and then was dragged away, still, Galileo-like, protesting in an undertone, "They *are* Daffodils."—A. M.

Annual Larkspurs.—Can anyone tell me where I can get seed of the old-fashioned, tall, single-flowered Larkspurs? I have tried vainly for some years past to do so, but can only obtain the clumsy, stodgy, shapeless Stock or Hyacinth varieties in vogue nowadays. I sigh in vain for the "airy fairy" flowers which have apparently vanished from our gardens. Perhaps they have flown away, frightened by the florists' monstrosities referred to? In childhood I always feigned the fancy that their flowers had just perched lightly on the branches, and in that lightness consisted their especial charm.—AN AMATEUR.

Hardy Azaleas.—I was much interested in the article on these plants by "A. O.," page 93, issue February 24. Some years ago I visited a garden in the New Forest, and was much surprised to see the scores of hardy Azaleas growing in the borders on both sides of the long, winding carriage drive, and also in beds by themselves. I have never seen specimens grown in pots look better than these did. Many were models as regards form, and were 5 feet and more in diameter. The soil was mainly loam and gravel, and so peat and leaf-soil were added. Since that time I have taken considerable interest in the growing of hardy Azaleas in the open border, and I daresay more are so cultivated in Hampshire, and especially in the New Forest district, than in other counties. If they are extensively grown in other counties, I should, with many more readers, be pleased to learn something respecting the cultivation. Certainly in the district to which I refer the soil is, generally, very suitable.—B.

The Hoop-Petticoat Daffodil.—Mr. Reginald A. Malby has done a good service in praising so highly the little Hoop-Petticoat Daffodil on page 94 of the issue for February 24, but it would be useful were more of your readers to detail their experience with it as an established plant in the garden. One little bit of advice is worth giving, and that is that anyone who has really succeeded in establishing it should be cautious about disturbing the plants. I know one garden where it was established in plenty, had also seeded, and the seedlings had come into flower. The border was, however, in need of renovation, and the little Hoop-Petticoats were lifted and replanted. They never did any good again, and they are truly missed in the garden. In another garden well known to the writer this charming little flower had also become established in a low rockery. This was taken down and reconstructed, the Daffodils being restored to their former position, but in fresh soil. They also failed. Why this happened nobody can well say, but the lesson is an obvious one. The sulphur-coloured one, *citrina*, as it is often called, is as

good as any for its apparent willingness to establish itself.—S. A.

Green-Leaved Aucubas.—Your note on this plant in the issue of February 24, page 89, is timely. In certain positions where there is nearly always a cold draught, and very often keen, cutting winds, various kinds of shrubs have failed to live; but the green-leaved Aucuba did well and without, as it were, turning a leaf. For many years I have noticed some plants growing in tubs in positions where the light is not good even in summer-time, and they have done remarkably well. These are undoubtedly grand shrubs for town gardens. They are wonderfully free-rooting and like a rather stiff loam.—SHAMROCK.

The Laburnums.—I heartily endorse the remarks on the Laburnums made on page 97 in the issue of February 24. There are few kinds of flowering trees that bear more blossoms or continue to do so as consistently year after year. I have seen trees growing in small gardens for nearly twenty years, and they did not increase in size much during that period, but the blossom appeared in profusion every year. The soil was poor. Laburnums do very well under larger trees, and they certainly look charming in such positions. For growing in town and suburban gardens they are among the best.—AVON.

The Lapageria in the Open.—I have grown this for some years in the open, but I differ from some of your correspondents as to the best position for it. I find it impatient to hot summer sun, and that it does better if planted on a north wall. I have it in such a position here, and both varieties, *rosea* and *alba*, were in good flower during the first week in January in this situation. It should, of course, be planted in peat, and as slugs are much addicted to it, it is better for a tin collar to be placed round the base. I give it a light sprinkling of straw over the roots during very frosty weather, but no other protection.—L. HARCOURT, *Nuneham Park, Oxford.*

Gold-Laced Polyanthuses Wanted.—There is a revival in Lancashire in the cultivation of these flowers, and many good seedlings have been raised of late years. It is, however, a very sad fact that many old and good varieties are now extinct, so far as the growers who exhibit are concerned. As some of the old varieties were better than anything now existing, and as some of them may still be grown in gardens that one knows not of, I ask your readers to let me know if they can give any information as to the existence of Bullock's Lancer, Cox's Prince Regent, Maud's Beauty of England, Hufton's Lord Lincoln, Addis' Kingfisher, or any other old named variety. The old varieties that we still have are Saunders' Cheshire Favourite, Crownshaw's Exile, Buck's George IV. and Sir Sydney Smith. I have been emboldened to make this enquiry because recently a florist brought me a bloom of Nicholson's King, an old-time flower the existence of which at the present time I had no knowledge of. Other old flowers may be surviving somewhere, and any genuine information about them will be gladly received. I use the word "genuine" advisedly, as a certain enthusiastic florist friend of mine was, a few years ago, supplied with common Cowslips and Primroses from an enterprising floricultural fraud. There is nothing more beautiful than Cowslips and Primroses; but even the most ardent florist feels disappointed when they appear instead of the rare, if not extinct, Bullock's Lancer.—JAMES W. BENTLEY, *Stachhill, Castleton, Manchester.*

Gaillardias.—The coloured plate of some of the varieties of these hardy flowers now in commerce published with THE GARDEN for March 2 should help to draw attention to them as furnishing brilliant colour-effects in gardens and as growing capital flowers for cutting and bunching. The varieties pictured are but a few out of so many now named, most of which can be reproduced from sowing a packet of mixed seed of the *grandiflora* section either in the open or in shallow pans in a frame, raising strong plants to put out where they are to flower in September. Gaillardias, because of the glowing yellow, red and crimson hues of the flowers, do not harmonise well with many other flowers; indeed, they seem best suited for planting in a huge bed solely, or to form a front to a long border which behind is planted with shrubs. Impatient of being tied up to stakes, the plants, if they have a free fall, do better if allowed to grow free and unrestrained. Then they give a great wealth of colour.—D.

Pure White Snowdrops.—One wonders what would have been said of the white Snowdrops by the poet who wrote: "Could you understand one who was wild as if he had found a mine of golden guineas, when he noticed first the soft green streaks in a Snowdrop's inner leaves." Probably he would have scorned them as abnormal flowers or monstrosities of Nature. Yet they have some beauty, and the Snowdrop fancier delights in their flowers. In these white Snowdrops the green markings, both on the exterior and interior of the inner segments, are absent, and the flowers are entirely white. The first of these to be found is one called *poculiformis*, which is not only devoid of the green markings, but has also the inner segments, or "tubes," as some call them, as long, or nearly as long, as the outer ones. This gives the flower a very attractive appearance. It is, unfortunately, a weak grower. Another one, called *Galanthus nivalis albus*, is not so pleasing, and shows a greater tendency to throw flowers with a few green markings. These forms have appeared in several places, and I received one resembling *poculiformis*, but with additional segments, from an old Scottish garden some years ago.—S. ARNOTT.

Soaking Sweet Peas.—I do not propose to follow Mr. H. J. Wright in making a selection of six of the best novelties in Sweet Peas. It is rather chasing a chimera, and if fifty critics sent selections, what a confusion would be found. But this matter of the use or non-use of soaking Sweet Pea seeds to soften the husk before sowing to facilitate germination is of practical importance. If it is of no use to saturate Peas in water prior to sowing to soften the skins, what causes operate in the soil, if it be not moisture, to cause the skins to soften and thus enable germination to take place? Does the soaking in water for a few hours fail to produce that germinative action which burying in comparatively cold soil does? If skins of seeds are, when soaked, unpervious to the action of water, how comes it that they are fully susceptible to the action of moisture in the soil? Or is it that water alone exercises no influence, but that water in conjunction with soil does? If that is so, has anyone tried burying Sweet Pea seeds in damp sand in a box or a flower-pot for twenty-four hours, then running them through a fine sieve and sowing the seeds? If Mr. Wright's theory is a correct one, then it is difficult to understand why burying in moist, cold soil should enable moisture to do to the seeds what tepid water will not do out of the soil.—CRITIC.

Pruning Climbing Roses.—On page 91 "A. P." says "the proper time to do this is the late summer." I contend it can be equally well, or better, done at the present time. As to cutting out the rods entirely after *once* flowering, I can assure "A. P." it is a very wasteful practice, as all strong rods of such varieties as Crimson Rambler, Blush Rambler and many others, if after flowering they are spurred in to one or two buds of the base the following February, will flower profusely; in fact, if the young rods are not fully ripened, I would prefer the year old rods. If, on the other hand, the young rods are ripe, retain them their whole length by all means. As to the Hybrid Perpetuals, "A. P." does not mention the necessity for cutting out weak and exhausted wood, irrespective of its position, which is of more importance than the length allowed for the shoots retained; that will depend upon the variety and purpose for which it is grown. I am well aware the fashion now is to prune the climbers in late summer; and if the climbers, why not all? I have seen examples of this summer pruning the following spring, and if it is very mild all goes well; but if not, the summer pruning forces the buds to start earlier, and consequently they are more liable to be damaged by late frost. I have practised February pruning for some years with success.—H. SMITH.

Bitter-Pit in Apples.—In the issue of THE GARDEN for December 2, 1911, I notice some observations by "Scientist" on bitter-pit in Apples, and as I am investigating this particular disease at present, I would be pleased to have further information on one or two points. 1. He observes that the disease was extremely prevalent during the past year, and since the past summer in England was exceptionally hot and dry, it would be interesting to know the rainfall during the maturing of the fruit in the orchard where the fruit of Tower of Glamis that was illustrated was grown. Generally with us the disease is worst when the weather is intermittent, when there is a dry spell followed by heavy showers, and it would be instructive to learn what rain occurred during the ripening of the Apple and when it fell. 2. In *Nature* for June 1 there is a note from F. C. Constable concerning the theory that the retardation of the flow of sap tends to the production of fruit as against wood buds. He observes that in 1910 the want of sunlight tended to weaken the vitality of trees, and so tended to retard the flow of sap. He asks, "Should we not, then, expect this year (1911) to find an *excess* of fruit-buds?" and adds, "The show of Apple blossom round us, in Gloucestershire, is exceptionally profuse." Since there was an excess of sunlight last summer, it would be interesting to know what effect it is having, or will have, on the development of fruit-buds. Perhaps you or some of your readers could give the desired information and so oblige.—D. M'ALPINE, *Department of Agriculture, Victoria, Australia.*

Galanthus Imperati.—If there is one kind of Snowdrop which deserves extended cultivation more than any other, then surely it is Galanthus Imperati. A native of Italy, its real charm lies chiefly in its vigour and size of flower, making it a glorified form of the common Snowdrop. Like many others, this Snowdrop is variable. All of the variations are lovely, but it is a difficult matter to place one's finger on the exact spot where Galanthus Imperati ends and the common Snowdrop, *G. nivalis*, commences. For this reason the former is often regarded as a variety of the latter. The outer segments of the flowers of *G. Imperati* should finish abruptly and taper to the base. The inner segments are spotted green; this is very conspicuous on a sunny day when the flowers are fully expanded. It is the most stately of

THE ROSE GARDEN.

WHY WE PLANT ROSES IN SPRING.

WHAT a vast change has come over the Rose world this last fifty years! Prior to that time one would have scarcely dreamed of planting a Tea Rose until all danger of spring frosts was over, and then the plants had to be pot-grown, for nurserymen never thought of budding Tea Roses outdoors. But now we have a glorious race of Hybrid Teas that seem to lend themselves to any mode of treatment.

If it is necessary to defer planting until spring, they are as successfully planted at that time as in the autumn; in fact, I would prefer spring to autumn for the beautiful decorative Roses used for bedding or massing. The Briar, upon which most of our modern bush Roses are budded, really takes to the soil more readily when the land begins to feel the effect of the spring sunshine than it does during the cold, wet autumn season. One has only to observe how the Briar stocks succeed in Rose nurseries as verification of this fact, for no Rose-grower would think of planting his seedling or cutting Briar stocks until February and March; but by July they are a veritable tangle of growth.

The only disadvantage against spring planting is that one may not be able to obtain plants quite so strong as in the autumn; but even that difficulty is being overcome, as Rose nurserymen hold back large stocks of plants for the spring business, and they are kept dormant by frequently removing them from the soil and heeling them in again. This retarding is very essential to real success in spring planting. Obviously, if one lifts a plant already started into new growth, it will receive a great check; but this is prevented by planting dormant bushes.

I know many amateurs defer planting Roses until spring, thinking that they are safe against injury by winter frosts, and that if there is to be any loss it will fall on the nurseryman. I am afraid this last autumn many would-be planters were prevented from doing so owing to the great rainfall. The soil was

prepared, but the incessant wet made it impossible to plant in anything like favourable conditions. Even if the plants were purchased, they would have been better heeled in the soil in some out-of-the-way spot than set out when the soil was wet and very sticky. Such precautions would well repay anyone, because it is courting failure to plant at such a time, unless a good supply of prepared compost were at hand to put on to the roots.

Four Essential Points to remember when planting in spring are: (1) To deeply cultivate the soil; (2) to procure good, sound, dormant plants; (3) to hard prune at the time of planting; (4) to well tread the soil at the time of planting,



A BEAUTIFUL SNOWDROP: GALANTHUS IMPERATI.

Snowdrops, growing from 6 inches to 12 inches high and is by no means particular about soil. When once planted this modest flower may safely be relied upon to take care of itself. There are many named varieties, of which the finest is *G. Imperati Atkinsi*.—S. P. N.

FORTHCOMING EVENTS.

- March 11.—United Horticultural Benefit and Provident Society's Annual Meeting, 8 p.m.
- March 13.—East Anglian Horticultural Club Meeting.
- March 14.—North of England Horticultural Society's Show at Bradford.

and again about two weeks hence. If for any reason the soil cannot be dug more than 18 inches deep, I would suggest adding another 6 inches of good soil to the surface, and thus forming a sort of raised bed. Let this added soil be good, well enriched with good manure, and the whole incorporated with the staple soil. Manure should be liberally supplied also to the lower soil, so that there is a supply of good food when later on in the summer the roots find their way into it. A handful of bone-flour should also be given to each plant just before placing the final soil on to its roots.

As regards the third point, all ordinary Roses should be cut back as soon as planted to about five inches, and, finally, at the beginning of April to about three inches. This looks terribly drastic, but it pays. Strong growers of the Hugh Dickson type may be retained 2 feet in length now, and finally reduced to about eight inches or ten inches. Standards may be treated on the same lines, and

numbers last April and treated them as I have here attempted to describe, and they were a glorious success. Some of the plants were even planted in the early days of May, although I do not advise deferring the work until then. But when there is no opportunity to plant before May, then, of course, one must resort to the more expensive method of setting out pot-grown Roses, and this is rarely satisfactory unless one is prepared to pay high prices for extra-sized plants. P.

THE ROCK AND WATER GARDEN.

A BEAUTIFUL PLANT FOR A DRY WALL.

(ANDROSACE LANUGINOSA.)

THE Himalayan *Androsace lanuginosa* is one of the loveliest members of a genus remarkable for

One of the happiest instances of success I have had with this fine plant is as a subject for a sunny dry wall, or, as seen in the illustration, where it protrudes from a wide joint in the steps leading to the garden. Such positions favour the development of alpine plants, which in more level planting frequently succumb to our moist climate in winter. Grown in a dry wall, *A. lanuginosa* is a reliable perennial, vigorous in growth, and gives the maximum season and quantity of blossom.

The genus belongs to the Primrose family, but the flowers of *Androsace* attain even a higher type of beauty than that found among Primulas. The flowers are borne in umbels upon very slender stems some six inches high, and are coloured a soft rose shade with a bright, deep-coloured eye. It begins flowering in June, attaining its maximum beauty in July, and generally throws a few flowers right up till October. It is readily propagated by cuttings taken during July or August and inserted in sandy soil, keeping them close for three or four weeks till rooted, when they are potted up and grown in an unheated frame ready for planting out the following spring.

Coombe Court Gardens.

THOMAS SMITH.

IN THE ROCK GARDEN.

THE little gems are fast beginning to peep up above the ground, especially in that section called the moraine. The soil requires to be renewed in a rock garden, as it becomes exhausted and worn out in the process of time. *Iris Histrio* appeared in flower on January 2. Of course, the lovely *Iris stylosa* has been in flower in different parts of the garden from early in December, and has flowered well this season. *Narcissus minimus* was in flower on January 9. The little clump of *Cyclamen ibericum* (*Atkinsii*) has been charming this winter, better than I have ever seen the plants before. The Snowdrops are very gay, and the Winter Aeonite is also prominent. *Crocus Sieberi* is a mass of colour every day on which the sun appears. This has pale violet flowers, and is a mountaineer. Everybody should grow this gem; it can be obtained for 6s. per hundred or 1s. per dozen. *Crocus Imperati* is also in flower. This has purple stripes on a bluish white, with a yellow throat, and always flowers in January if the weather is at all agreeable. *Rhododendron parvifolium* has been in flower since the middle of January. This makes a charming little dot plant. The *Hellebores* nesting near large stones have been, and are now, beautiful, especially so when protected with glass covers, when they are as clear as the stove *Eucharis*. Small plants of *Hamamelis mollis* and *zuccariniana* are very interesting with their spidery-looking flowers, which arrive while the twigs are yet bare, and these plants can be easily kept in bounds by pruning after the flowering stage is over. The pretty *Erica carnea* (red and white) are now finely in bloom, and clumps of these are very pretty at this season. *Nandina domestica* has had quantities of beautiful coral red berries, and has been a source of much attraction during the winter, as this is the first time such a wealth of berries has been seen. It is hardy here now, and has made quite good-sized bushes. It is a native of Japan, and in addition to the pretty berries it has very handsome foliage, with graceful metallic, Fern-like leaves. *Parrotia persica*, a shrub in the background, is now studded with blooms. This is a Persian tree. The leaves turn orange and crimson in the autumn, so it is really of special interest plant twice in the season.

Leonardslee.

W. A. COOK.



A CHARMING PLANT FOR STONE STEPS: ANDROSACE LANUGINOSA.

climbing Roses of the better class—that is, the large-flowered sorts—should be cut back to about three feet now, and finally to 2 feet. The Crimson Rambler tribe may be similarly treated, to their great advantage in the future; but the wickuraiana Roses may be left almost full length. These remarks specially apply to spring-planted Roses.

If the weather be dry throughout April, it would be a great help to the plants if they were given a good watering, taking care to hoe the soil over the next day. This should be repeated every week for about a month. In June very weak liquid manure may be given once a week, but keep off strong chemical manures. If care is taken in planting as advocated, there will be a grand show of bloom this summer, and repeated even more grandly in the autumn, providing the free-blooming decorative sorts are planted, with which our collection to-day is so very replete.

For the comfort of those readers who cannot even plant just yet, I may say I planted large

the great number of floral gems contained within it. While the majority of *Androsaces* are readily recognised by their small, rounded rosettes of silky grey-green leaves and runner-like growths, in the species under notice the intense silky grey of the leaves is most pronounced. Yet the habit of the plant is quite distinct, the stems being long, trailing and spreading, and the desire of every cultivator of *A. lanuginosa* is to possess a mass a yard wide tumbling in wild profusion over a sun-baked boulder.

It succeeds best in a sheltered, sunny spot on the rock garden, and enjoys a deep, well-drained bed of sandy loam and peat, freely mixed with sandstone chips. Under such conditions it makes rapid progress, and if ordinary precautions are taken to safeguard the plant from excessive moisture in winter, it may generally be grown to some considerable size, and therefore enjoyed for a number of years, as the plant is an evergreen perennial.

THE KITCHEN GARDEN.**SEASONABLE NOTES ON VEGETABLES.**

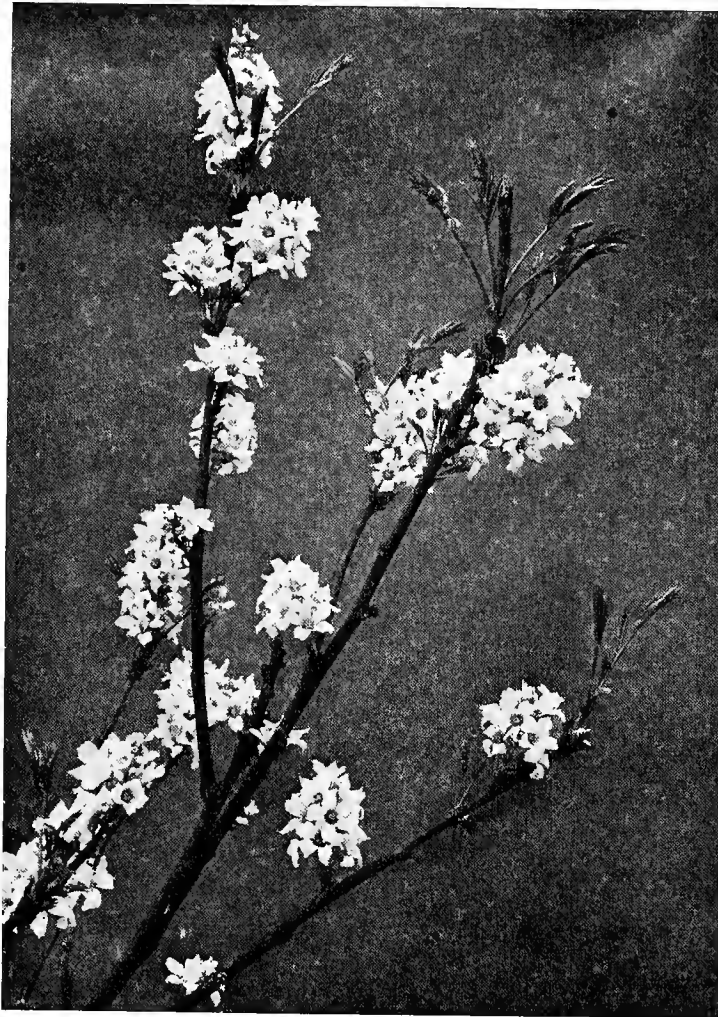
Brussels Sprouts.—In these we have the most important of all the green autumn, winter and spring vegetables, and no efforts must be spared to secure a succession of buttoons of perfect quality. The plants demand a long season of growth; indeed, six months is not too much to allow from the time of sowing the seeds to commencing the use of the produce. In some gardens a sowing will already have been made; but in the majority of instances this month will be the popular time. A warm border where the soil is light should be chosen, if possible, for the seed-bed, and seeding must be thin to favour stocky growth from the start; to the same end thinning must be started in good time under the excellent rule that at no time shall the young plants touch each other. Occasional dustings with a mixture of equal parts of old soot and wood-ashes in the seed and nursery beds will be beneficial.

Broad Beans.—Towards the end of the month a good sowing should be made of some selected variety of Broad Windsor Bean, and it will probably be the last, as in many families these are not highly appreciated when there is an abundance of Green Peas at command. The seeds ought to be placed 3 inches asunder in trenches about the same depth and 4 inches to 10 inches wide, according as single lines or double lines of plants are preferred. When the seedlings come through, thinning should be done until the distance from plant to plant in the rows is not less than 5 inches, and if it is 6 inches the grower will not lose in any respect. It is imperative to the finest crops that the ground shall be in perfect mechanical condition and contain plenty of food.

Sowing and Planting Asparagus.—There is probably no one who does not immensely enjoy a dish of well-grown English Asparagus, though there are many among us who cannot spare the time to worry over the infinitesimal scrap of edible portion that one finds on the miniature scaffold-poles which are served as Asparagus at some hotels. The best is grown in one's own garden, and a start can be made from seeds, or plants may be purchased. In the former case the sowing ought to be done about the end of the third week of the present month, distributing the seeds thinly and evenly in drills from 1½ inches to 2 inches in depth, the lines being 1 foot asunder. It is thus extremely easy to raise many plants, but a considerable period must necessarily elapse before the plants will yield any produce; in fact, it is three years before any cutting can be done, and four years before a really good crop is secured. By planting three year old crowns, cutting commences

in real earnest twelve months or so later. In all instances the soil should be deep and fertile; but except on close, heavy, cold land it is not essential to raise the beds above the normal level of the garden.

Succession Peas.—It is necessary to maintain an unbroken supply of excellent Peas, and to this end frequent sowings must be made. One or more lines, according to the demand, should be sown immediately, and further seeds got in at the end of the month. Still give the preference to a warm border, if such can be spared, and see that no efforts have been spared in the thorough preparation of



A LITTLE-KNOWN BUT BEAUTIFUL HARDY SHRUB: XANTHOCERAS SORBIFOLIA. (See page 122.)

the ground. A good depth of soil and plenty of available food are required to produce plants which will give heavy crops of Peas of the finest flavour, size and colour; and inferior stuff does not do nowadays.

Celery.—Many amateurs do not raise their own Celery; but unless an arrangement can be made to exchange other plants for Celery with a friend, it should always be done, because those which are purchased at barrows are apt to prove most disappointing. A few seeds sown now and a few more in April in pans of light soil in a frame will provide all the plants that will be wanted in the small garden.

TREES AND SHRUBS.**SOME EASILY - GROWN HARDY FLOWERING SHRUBS.**

(THE DIERVILLAS.)

THE various Diervillas, or Weigelas as they are more often called in gardens, form a showy group of shrubs which blossom towards the end of May and through June, although one or two kinds have a longer flowering period. Eight or nine hardy species may be obtained, but they are generally neglected for the sake of their

more showy offspring, the majority of the kinds usually grown being hybrids or varieties. The species are widely distributed, for some are indigenous to North America, others are found in Japan, and contributions are made by the floras of China and Siberia. Diervillas are not difficult to manage, providing rich, loamy soil can be given; for although they grow in soil of inferior quality, the results are less satisfactory than when better material is provided. As they are gross feeders, it pays to give established plants a surface-dressing of well-rotted manure each spring. Regular pruning is not an absolute necessity, but more satisfactory results are obtained by thinning the bushes after flowering. This gives an opportunity for cutting out branches which appear to be weakening, thus keeping the centres of the plants open and giving encouragement to young wood. It must be borne in mind that the flowers appear from short axillary growths from the previous year's wood as a rule; therefore it is necessary to obtain plenty of young wood each year.

Propagation.—This offers no difficulties, providing cuttings are taken at the right time. Those inserted in a close and warm frame during late May or early June will root in ten or twelve days; but if cuttings are not taken until August, they will most likely take as many weeks to root, and will take longer to form serviceable plants. Cuttings rooted in June and planted in good nursery ground the same summer will, in eighteen months, have formed plants quite large enough for permanent planting. Old plants

which appear to be deteriorating ought to be destroyed and a fresh start made with young stock, for nothing is gained by keeping worn-out plants. The Diervillas are suitable for shrubbery planting or for specimen beds, but they are not satisfactory subjects for the wild garden; at all events, there are many other shrubs which would look more at home in such a place. Of late years a few kinds have been used for forcing in spring for conservatory decoration, and they are excellent for the purpose.

D. florida and *D. grandiflora* are a couple of Japanese species which grow into large bushes 5 feet or 6 feet high and 8 feet or more through.

H. J.

Their tubular flowers vary in character, but are usually about an inch long and nearly an inch across the mouth. They are borne several together in short racemes, and are various shades of pink in colour. *D. florida*, in many respects very similar to these species, is a native of China. The type has pinkish flowers, but a variety, *candida*, has white blooms.

Some Good Varieties.—The chief interest about the Japanese *D. japonica* centres in its variety *hortensis*. This is a bush 3 feet or so high, which bears a profusion of pure white blooms. It is the best of the white-flowered kinds, and is an excellent subject for a bed. Another variety of *D. japonica*, called *Looymansii aurea*, is most noticeable by reason of its golden leaves in early spring. *D. middendorffiana* is a Siberian shrub, notable by reason of its large, sulphur-coloured blooms. Unfortun-

ately, it is not so hardy as the other kinds. In midwinter the wood does not appear to be hurt, but, like many shrubs from countries where a long and severe winter is experienced, it begins to grow too early in a milder climate, and the young shoots are incapable of withstanding the baneful effects of late spring frosts and cold east winds. It is a plant to persevere with, however, on account of its distinct and beautiful flowers. *D. præcox* is a Japanese species with red flowers. It blooms during early May, somewhat in advance of the other kinds.

grows 3 feet to 4 feet high and bears rich deep red flowers freely from May until the end of August. An older variety, but a very popular one, is *Abel Carrière*, with deep rose blossoms. *Multiflora* and *van Houttei* are other varieties with deep red or crimson flowers, while *Congo*, with dark red blooms, *Gloire des Bouquets*, *Othello*, *Diderot*, *Emile Galle*, *Lavallei*, *President Ducharte* and *Steizneri* are other showy kinds. For many of these ornamental hybrids we are indebted to the late M. Lemoine of Nancy, who raised so many hybrid shrubs and other plants.

NANTHOCERAS SORBIFOLIA.

This handsome flowering tree belongs to the same Natural Order as the common Horse Chestnut. The Order is known as Sapindaceæ, and embraces many trees and shrubs dispersed over the whole

THE FLOWER GARDEN.

THE ALPINE ASTER AND ITS VARIETIES.

THE majority of perennial Asters or Michaelmas Daisies common in gardens are readily recognised by their Daisy-like flowers, which are generally carried upon many-branched stems, some 2 feet high and upwards. *Aster alpinus* presents a striking anomaly, in that the individual flowers are probably the largest, while the plant itself is the dwarfest in the genus. It is a low, tufted subject, forming neat, rounded masses of leafage that scarcely exceed three inches in height. The flowers spring direct from the crowns, and are borne singly on stiff, erect stems some six inches to nine inches high. Its dwarf habit and the distinct character of the flowers render it a desirable subject for rock garden planting, in addition to which it presents no cultural difficulty, the plants succeeding in any good garden soil, provided it is well drained and the position open to the sun.

During winter and early spring some protection should be afforded the crowns from the ravages of slugs, as these pests appear to find them extremely palatable, and every bud destroyed at that season means a corresponding loss in flower.

Aster alpinus and its varieties are readily raised from seed, which is best sown in pans of prepared soil under glass in spring, the seedlings being transplanted into pots or boxes, and subsequently planted in a nursery bed in the open. By this method strong plants are assured to flower the following year.

The plant flowers in June, and the blossoms are exceedingly showy, about two inches across, and are borne singly upon 6-inch stems; the ray florets are coloured a bright purple, while the disc is yellow. The variety *alba* is similar in growth to the type, the flowers being white; in the variety *speciosus* the flowers are a rich violet colour and much larger than the type, the stems being about nine inches in height. *Superbus* is another good form, attaining the same height

as the last-named; but the flowers have more purple in their colouring. The two last-named varieties are highly desirable rock plants.

Coombe Court Gardens. THOMAS SMITH.

JAPANESE IRISES AS BORDER PLANTS.

It should, I think, be more generally known that this group of Irises (*Kæmpferi* or *lævigata*) is far more amenable to ordinary border cultivation than is usually supposed, frequent statements to the contrary notwithstanding. At page 96 of THE GARDEN it is stated that the "ideal situation is at the margin of pond or stream," though more often than otherwise, because of soil and other things which are not ideal, the plants fail miserably in these and similar situations. Too frequently at the margin of lake or pond or stream the soil is of an ungenerous, clayey nature, tenacious and water-holding to a degree, without richness,



THE ALPINE MICHAELMAS DAISY, ASTER ALPINUS.

and of a more or less evil-smelling character, the product of an over-gorged wetness that is as virulent poison to the roots of these plants. I do not say that it is always so, for I know of instances to the contrary; but I also have known of so many failures in such places—due to the fallacious belief that water and continued soil wetness is as a veritable panacea to the ills to which the plants may be heir—that I hasten to give readers of *THE GARDEN* the choice of a useful, inexpensive equivalent when cultivating these Irises.

Border versus Water-side.—For many years I grew the plants with success in well-enriched loamy soils, and I have yet to see finer masses than those so obtained. At the Holland Park Show of 1910, Mr. Wallace of Colchester, famed for his high-class hardy plant culture and exhibits, grouped in near proximity to a streamlet clumps of these Irises bearing the most magnificent flowers I have ever seen, the plants the product of open field cultivation in the famous Colchester soil, far removed from water. Hence the incessant saturation of soil by water is neither essential nor even necessary, while, as I have pointed out, it may be distinctly harmful, or even fatal, to success. We in this country were probably early led astray by the pictures of these plants sent from Japan, showing them half submerged at flowering-time, the result being that the water-side was considered the only place suited to them, quite regardless of soil. This we know to be wrong, and we also know that the border cultivation is more simple and available to a much greater number.

In saying this I have no desire to belittle water-side gardening, or to say a word that would lessen the planting of these Irises in such places on well-considered lines. By this I mean that, however well they may appear to succeed partly immersed, I believe they would do infinitely better if so raised that the root-fibres only reached the moisture. This much, indeed, I have repeatedly proved, though I am willing to admit that there was an appreciable difference in the plants growing in clayey or heavy soils as compared to those grown in light soils. At Wisley, for example, we see the plants beside the water and flowering freely.

I am, however, very well assured that, were these same plants so raised that the root-fibres only touched the water, a greater vigour and finer flowers would speedily follow. Occasionally, too, the failure of these Irises by the water-side is due to the quality of the water, very hard water not being congenial to their requirements.

The Value of Rich Soil.—It is, perhaps, insufficiently recognised that these Japanese Flugs have a remarkably voracious appetite. In any soil preparation I should be inclined to include at least one-third of manure, one-fourth good leaf-mould, and the remainder of loam of a moderately light character. In such a soil the roots ramify freely and form into huge mats not far from the surface. The plants revel,

too, in free supplies of liquid manure, and, where it can be employed, this may be given without stint.

Transplanting.—It is a mistake to transplant these Irises in big masses intact, and the best time for division and replanting is March and early April. The work of dividing is best done just as they are awakening to a season's work. At that time they may be freely divided; not hacked by spade or chopper, but having laid a clump on its side, drive two small hand-forks, placed back to back, deeply into the rootstock below the crowns, and finally wrench outwards in opposite directions. In this way the tough, almost woody, mass is separated without loss and with a minimum of injury. The operation, if need be, may be repeated in order to reduce the plants to three or four crowns apiece. I need

variety named Bertini will not only succeed during a scorching summer, but if given the right rooting compost and sufficient watering, will revel in it. The colour is vermillion-scarlet, with petals long and pointed. It is also a most vigorous plant and produces the largest tubers of any Begonia with which I am acquainted.

Tubers started in March in gentle heat and transferred to frames when fit, using partly-decayed leaves, will make flowering plants by the first week in June. If carefully lifted with a good ball of soil and transferred to beds containing a compost of loam, half-decayed leaves and cow-manure, an almost immediate effect will be produced, which will continue throughout the summer and autumn until the plants are cut down by frost. Horticulturists who favour Begonias for bedding and are not acquainted with this variety would do well to give it a trial.

A. J. COBB.

The Gardens, Duffryn, near Cardiff.

SEASONABLE NOTES ON AURICULAS.

THE results of the notes which I had the privilege to contribute to *THE GARDEN* of January 27 have surprised me. I deplored the waning popularity of the flower, but correspondence proves that there still remain many ardent worshippers at the shrine. I was aware of the great popularity of the flower in and around the metropolis of the Midlands, and should like to learn from other sources that there are as enthusiastic workers elsewhere as there. One correspondent, while thanking the Editor for instituting a column devoted to his favourite flower, includes a happy grumble that I should suggest a distance of 2 inches asunder in sowing the seeds. He is worried to know where those who sow 400 or 500 seeds each year would be able to find accommodation for the number of receptacles which such a distance of setting would involve. There is much in this argument, and I will agree to the sowing being done at 1 inch, provided that this is not interpreted to mean half that distance or less, as is too commonly the case. Mr. C. Turner's note on the popularity of the Auricula on page 66 of *THE GARDEN* is of much



AURICULA FAVOURITE, AN EXCELLENT SHOW VARIETY.

hardly add that these divided examples will not flower before a year or more has passed. Plant 18 inches apart in irregular colonies or groups.

E. H. JENKINS.

A GOOD BEDDING BEGONIA.

It has generally been conceded that Begonias as bedding plants were far from successful during last summer. Even those fortunate enough to be able to supply their plants with copious waterings had only a moderate return for their labours. The dry atmosphere was altogether too much for these shower-loving plants. It is some consolation, however, to know that all varieties do not object to the tropical conditions. I have proved to my entire satisfaction that the

interest, and I have no doubt that he is correct in his assumption that the growing favour in which Polyanthuses and garden Primroses are now held accounts for the comparative scarcity of the Auricula. The tendency at present seems to be to grow only those plants which do not involve the slightest trouble, but which make a brilliant display in the garden. Auriculas must be studied, loved and cared for, and at the end the reward will be an exquisite refinement with no gaudiness at all. However, I now hope to see them rise in general esteem.

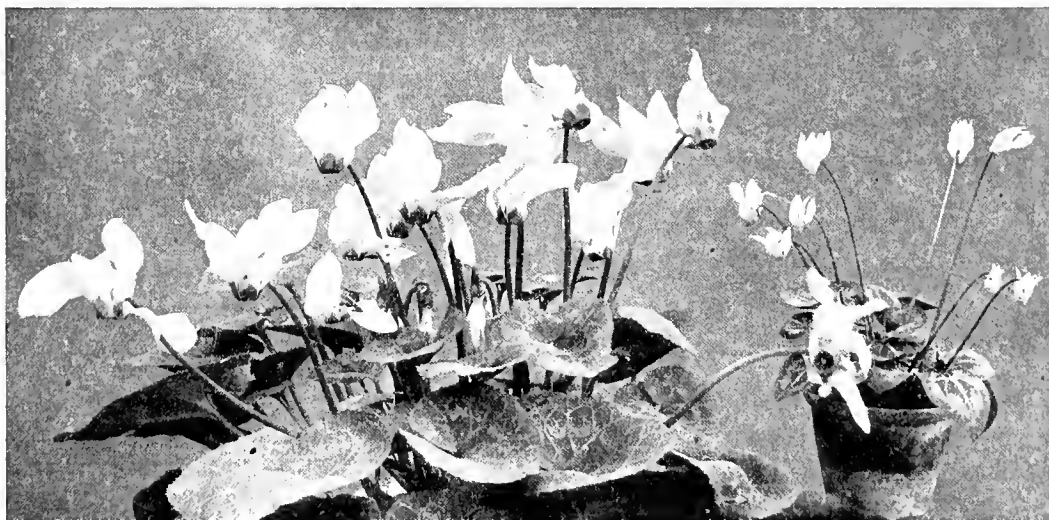
Twelve Show Auriculas.—Those who have studied the show or prize Auricula know that it is divided into four sections or groups, and that there are numerous varieties in each. With a view

to aiding the novice in forming a collection, I purpose now to give the names of twelve varieties, embodying representatives of each group, that would form a nucleus from which the grower could proceed to any length convenient to himself. In the green-edged division choose John Garrett, Abbé Liszt and Rev. F. D. Horner; in the grey-edged, Colonel Champneys, George Lightbody and Lancashire Hero; in the white-edged, Acme, Heather Bell and Reliance; and in the selfs, Black Bess, Heroine and Mrs. Potts. To the last-named trio may well be added the beautiful variety illustrated, which is of fine form, substance and colour. Let me say at once that I do not enumerate these as the finest varieties of their respective divisions, but as sorts of unquestioned merit which present no material difficulties of cultivation. With Auriculas, as with many other flowers, some varieties are more difficult to grow to perfection than others, and it is far from my wish to start the tyro with those that are likely to fail or to eke out nothing more than a miserable existence. Those given are all excellent doers, and the veriest novice will be able to grow them well.

THE GREENHOUSE.

CULTIVATION OF THE CYCLAMEN.

FOR usefulness, attractiveness and profusion of bloom, Cyclamen as winter and early spring flowering plants stand unrivalled. Besides being beautiful and fresh-looking when well arranged in the warm greenhouse, they make handsome plants for drawing-room decoration, and the flowers stand well in water if pulled out and an inch is cut off the stem. There are now several beautiful colours among the giant-flowered type, and these, when well done, will amply repay the grower for the trouble bestowed upon them. The accompanying illustration is particularly interesting, since it depicts, on the right, *Cyclamen persicum*, the native species or wilding from which the cultivated forms have sprung. The large plant of the giant-flowered type is shown for comparison, and clearly demonstrates the wonderful improvement in size of flowers and floriferousness which has taken place.



A MODERN VARIETY OF CYCLAMEN ON THE LEFT, WITH THE WILD SPECIES, *C. PERSICUM*, ON THE RIGHT.

Twelve Alpine Auriculas.—In the alpine section there is not such a wide difference in the constitution of the plants, but with them, as with the others, there are some that grow more vigorously than others. I will, therefore, again restrict my selection to one dozen and recommend only those which I know to be of excellent character, both in quality of the flower and constitution: Comet, Mrs. Harry Turner, Mrs. Ball, Pallas, Toujours Gaie, Dean Hole, Diadem, Emperor Frederick, Florrie Henwood, Mrs. Martin, Unique and Mrs. Dodwell.

Offsets and Top-Dressing.—Some of the choicest show Auriculas do not produce many offsets, hence the price of the plants continues high, as propagation is so slow; but should any now be present on the plants, they ought to be promptly removed to relieve the roots of the strain of feeding them, and thus favour progress in the main plant. If the plants have not yet been top-dressed—I, personally, prefer to finish the task by the end of February—see to it at once, using sound loam to displace the old material that is removed.

F. R.

How to Treat Old Corms.—Now that the flowering period of Cyclamen is nearly past, perhaps a few remarks about the treatment of old corms may be of use to some readers of THE GARDEN. I know that some gardeners advocate treating Cyclamen as biennials, but I do not agree with them, for it is quite impossible to get the large, handsome, well-flowered specimens one frequently sees, produced from three to five year old corms, from corms one year or a year and a-half old. I have seen plants of Sutton's Giant White and Pink carrying from two hundred to two hundred and thirty full-sized, perfectly-formed flowers, and the foliage was all that could be desired. The corms were four years old, and I do not think that, however well they may be grown, the same number of flowers could be had from corms eighteen months old. I would certainly discard any cracked or gnarled corms; but so long as they are smooth and firm, there is no fear but that they will produce abundance of fine flowers if properly treated. As soon as the plants are past flowering, they should be thoroughly cleansed of all flower-stems and bad leaves, and given a sharp syringe

with Quassia extract. They should then be placed on a shelf or stage near the roof glass and kept fairly dry at the root. I do not believe in drying them off altogether. I find that they start into growth much more freely if the pots are tapped occasionally and the very driest plants watered. A perfectly cool house is best for them in the meantime, simply giving enough heat to exclude frost. As the days lengthen and the sun gains strength, a heavy syringing every morning will keep them supplied with sufficient moisture until they have made some growth, when watering must again be carefully attended to. From now onwards care must be taken not to run the water into the centre of the plant, or damping of the flowers and foliage will result. When deemed safe from frost, the plants should be placed on a bed of ashes in a cold frame, where they may remain all the summer.

Potting-Up.—Although quite good results may be had by simply top-dressing some of the larger pots, I am in favour of annual repotting of the whole stock. It is immaterial whether this is done just after the flowers are past or when the plants have made some growth. The potting compost that suits Cyclamen well is fibrous loam, broken up roughly with the hands, with the addition of a shovelful of good clean wood-ashes, one 5-inch potful of soot and one 5-inch potful of Peruvian Guano to each barrow-load of loam. They should be potted fairly firmly and the bulb scarcely half buried in the soil. Shading is necessary during sunny weather, and air must be carefully admitted, avoiding draughts as much as possible. The best sort of frame is one that has a ventilator at the back. Air can then be admitted without tilting the lights. After growth is well advanced, the plants must have abundance of air, and on fine warm nights the lights may be removed altogether, but on no account should the plants be left exposed to heavy rains. Early in September the plants should be housed, but still kept airy and shaded from bright sunshine. A position about

two feet from the roof glass is best for them until the flowers begin to open. Syringing morning and evening should be continued until the first flowers begin to expand, and a careful watch must be kept for green fly. An occasional fumigation with XL All Nicotine Compound will keep this pest down. When cold weather sets in, a night temperature of about 55° should be maintained, and air must now be very carefully admitted, as it is after the application of fire-heat that cold draughts do most damage. When well rooted in their flowering pots, Cyclamen are much benefited by careful feeding with some good fertiliser, and I find nothing suits them better than Clay's, with an occasional change in the shape of sheep-manure and soot put in a bag and steeped in a tank of water. Over feeding is an evil that must be guarded against. The water should be just coloured with the liquid, and it is much safer and more beneficial to the plants to feed with weak doses and often than with occasional strong ones.

JAMES G. BESANT.

Oak Park Gardens, Carlow, Ireland.

GARDENING FOR BEGINNERS.

HOW TO PRUNE ROSES.

TO the average beginner in gardening there are few operations which seemingly present greater difficulties than the pruning of Roses, yet, once a few fundamental principles are grasped, there is no operation that is more simple, that is, so far as it applies to the ordinary types of Roses which the beginner or amateur may be expected to grow. So as to make the pruning of these Roses as clear as possible, we publish on this page three illustrations from photographs, and a careful study of these, in conjunction with the hints given here, will enable anyone to prune their Roses with a large degree of success.

Bush Roses.—Fig. 1 represents an ordinary Hybrid Perpetual Rose of fairly vigorous character which has been pruned moderately severely to provide blooms for garden decoration. It will be seen that all old wood has been cut clean away, and that the growths have been shortened considerably, each being cut close to a bud. Now if this had been an extra strong-growing Rose, the shoots would not have been cut back so severely, and if it had been a very weak specimen, they would have been shortened more. This needs



FIG. 2.—A NEWLY-PLANTED BUSH ROSE. THIS SHOULD BE CUT BACK HARD TO THE BARS AS SHOWN.

a little explanation. A vigorous-growing Rose, if cut back severely, would grow more vigorously still the following summer, and, in addition, would not give us so many flowers. Likewise, a weak-growing bush, if only pruned lightly, would produce even weaker wood during the summer, and so would gradually deteriorate. If the grower wanted this particular bush to grow only a few blooms of high quality for exhibition, he would cut the shoots back to within 3 inches of the soil. This method of pruning is also adopted with Hybrid Teas and Teas.



FIG. 1.—A BUSH ROSE PRUNED MODERATELY TO PRODUCE A QUANTITY OF BLOOMS.

Standard Roses.—These are pruned in practically the same way as advised for bush Roses of the Hybrid Perpetual, Hybrid Tea and Tea sections.

Newly-Planted Roses.—Fig. 2 represents a newly-planted Hybrid Tea Rose of rather vigorous habit. Newly-planted Roses always need rather hard pruning, because the roots have been disturbed and would not be capable of supplying long shoots with sufficient nutriment. By pruning to the bars shown on the shoots in this illustration we leave about four buds on each, and thus counter-balance the disturbance of the roots. This hard cutting back of newly-planted Roses applies proportionately to practically all types, climbers included, although the shoots of the latter, being longer to start with, will be left longer, 18 inches to 3 feet, according to their strength and solidity.

Climbing Roses.—Fig. 3 represents a young established plant of Dorothy Perkins, a Rose that is fairly characteristic of the Japanese Hybrid Roses now so extensively grown as climbers. This small plant was selected for illustration, as a large one would not show the points so well. It was planted in the spring of last year, and made several not very strong but firm, well-ripened shoots. All the old wood has been cut away close to the ground to induce new shoots to spring up from the base this year, and the three wand-like shoots have just had their soft tops removed. These shoots will, if all goes well, flower this year, and if others spring up during the summer to take their place, as no doubt they will, the shoots seen now will be removed entirely next August or September, after they have finished flowering. On the other hand, one or more of them may throw out a long, vigorous young shoot, and if it does, this also will be retained for flowering next year. The point to remember in these Japanese Roses is that new wood, well ripened, is necessary.

Climbing Tea, Hybrid Tea, Hybrid Perpetual and Noisette Roses need the oldest wood cut out and the side growths shortened back to a good plump bud. The length of the side shoot left will depend almost entirely on its strength and the space available.

What to Prune With.—The best pruning instrument is undoubtedly a good, sharp pruning-knife. This makes a clean cut and does not injure the bark. March is a good month for pruning most of the ordinary types of Roses, except the Hybrid Japanese, which, as already stated, should have old wood cut out during August and September.

Rules for Pruning.—1. Cut out any dead wood and see that the cut is made in live wood. 2. Cut out any shoots that cross others. 3. Cut out very weak shoots right down to the ground. 4. Always prune to a plump, almost dormant bud that is pointing outwards. 5. Prune vigorous bushes lightly. 6. Prune weak bushes severely. 7. When Roses of moderate quality are desired in abundance for garden decoration, leave more shoots, and leave them twice as long, as you would if only a few blooms of exhibition quality are required. 8. Prune severely all newly-planted Roses, whether they were planted last autumn or this spring. 9. If not done last autumn, cut away the old wood from Hybrid Japanese Roses and just remove the soft tips from the firm young rods. 10. Never cut out a shoot unless you understand why it should be removed.

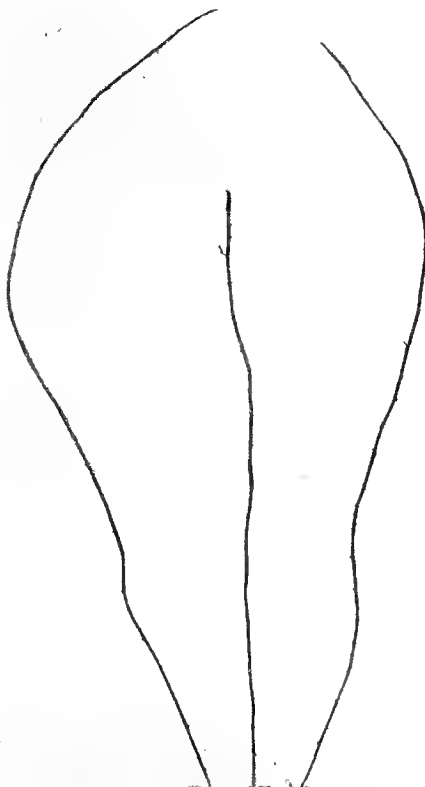


FIG. 3.—A YOUNG JAPANESE ROSE WITH THE SOFT TIPS REMOVED FROM THE YOUNG RODS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Kitchen Garden.

Lettuce.—Transplant into a warm border in the garden plants that were pricked out in the cold frame. Make firm, and protect the plants from the birds by stretching black cotton over the rows. If wireworm is present in the soil, lay traps of pieces of Carrot at intervals and examine daily. Both the Cos and Cabbage varieties may be planted in this way.

Seed-Sowing.—Sow now in boxes and raise in a cool structure the following: Cauliflower Autumn Giant, Brussels Sprouts for early buttons, Cabbage All Heart, Cabbage Blood Red and Leeks for later supplies.

Cauliflowers.—Transplant into boxes or frames the young plants from earlier sowings made under glass. Plants that were sown during the autumn and wintered in cold frames should have the lights removed entirely, whenever the weather permits, to promote sturdy growth.

Herb Border.—Any replanting that may be necessary to this valuable adjunct to the kitchen garden should be done without delay. Upon signs of deterioration of any of the subjects, these should be lifted and the border thoroughly well worked, incorporating some manure and lime, the latter especially on heavy soils. The perennial kinds may be increased or divided, as the case may be, and space should be left for the annuals to be sown or planted out at a later date.

Beetroot.—A sowing of Beetroot of the Globe or Turnip-rooted variety may be made, where space permits, in a cold frame on a mild hot-bed, sowing at the same time a few Radishes between the rows.

Celery.—Sow the seed now, or within the next few days, of varieties intended for the maincrop supplies. Sow thinly, and as soon as germinated elevate the pots or pans close to the glass.

Plants Under Glass.

Chrysanthemums.—Pot on as they require a shift singly into 3-inch pots, and water carefully for a time. The earliest-potted plants will need water oftener and more air admitted on favourable occasions.

Campanula pyramidalis.—Plants of the Chimney Campanula, as it is commonly called, that were raised from seed last year and have been wintered in cold frames should be looked over, the surface soil lightly stirred, and a top-dressing given and made firm.

Achimenes.—The tubers of these that have been resting in a warm house may now be shaken out carefully and repotted or planted in baskets. When grown in wire baskets and suspended in a warm house, these are very effective.

Pot Roses.—Any plants of these that are left in their winter quarters may now be brought out, the pots washed, and the growths pruned and started in a gentle heat. Avoid cold draughts, as this is conducive to mildew. Earlier-introduced plants will benefit greatly by applications of properly-diluted farmyard manure.

The Conservatory.—Endeavour to keep this as attractive as possible by introducing fresh batches of forcing plants, such as Azaleas, bulbs in variety, Lilacs, Wistarias, Prunus and Dentzias. Watering is best done early in the day, and the paths should be kept as dry as possible. Ventilate whenever the weather allows, if only for a few hours.

Liliums that are being pushed along for Easter will need warmth and moisture, and now that the pots are crowded with roots, abundance of water and occasional feeding. Fumigate lightly if green fly makes an appearance on the growth.

Zonal Pelargoniums.—Take cuttings now and insert firmly in 5-inch pots in a sandy compost. Water with a rosed can and stand on a shelf near to the glass in a greenhouse temperature.

The Flower Garden.

Michaelmas Daisies or Perennial Asters.—The sooner these are lifted now and divided the better, as growth will soon be moving fast. Where space permits, a border should be set aside for these charming autumn-flowering plants, as it is then that they are seen to their best advantage,

though, of course, in a mixed border they are excellent. Select nice young plants, not too large, otherwise too much growth will ensue and become crowded.

Perennials and Shrubs.—For growing in shrubberies some of the stronger-growing Asters, as the Novi-Belgii and Novæ-Angliæ types, are excellent, as they make good growths and are capable of looking after themselves. They also make useful material for cutting, and thus save the borders. Other plants that do well in similar positions are Delphiniums, Solidagos, Heleniums, the Everlasting Sweet Peas, Pæonies, Polygonums, &c.

Begonias.—The tubers that were saved from last season should be examined without delay and started in a warm house in boxes until growth commences, when they may be potted up singly into pots according to the size of the tuber. Seed of the tuberous varieties that was sown early in the year will need pricking out carefully into other receptacles in a fine compost containing some peat and plenty of sand.

Fibrous-Rooted Begonias.—These are equally effective for bedding, and may be raised in a gentle heat and transferred to frames eventually before planting out permanently.

Fruits Under Glass.

Pot Vines.—These will require much attention now and careful watering and feeding. While the bunches are in flower less atmospheric moisture will be needed, though I do not advocate a scorching dry atmosphere. Ventilate more freely, avoid cold draughts and close the house a little later in the day. Pollinate the flowers by lightly drawing the bunch through the hand or tapping the rods sharply. As soon as a set is assured, continue as before with a brisk, moist temperature.

Early Permanent Canes.—Endeavour to keep these as strong as possible by judicious ailing. Close the house early in the day and take full advantage of the sun's rays. If the house at night smells dry, damp down the paths the last thing.

Mealy-Bug is a troublesome pest, and during early spring, when the sun is shining, can be detected and killed with a little methylated spirit, and with perseverance this pest may be considerably lessened.

Watering.—Where several houses claim attention, it is well to do this systematically and make notes of the time each one was done and what stimulants were employed. If possible, use water chilled to the temperature of the house.

Strawberries.—Earliest batches should be thinned as soon as the best-set flowers are noticed, and for these it is advisable not to retain too many. The plants will need plenty of water now at the roots and a warmer temperature. Successional batches that are coming into flower should have an airy and light position in a forcing-house to enable the flowers to set. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Protecting Material.—Straw, &c., may now be taken off shrubs and Roses.

Jasminum nudiflorum.—Prune to produce rather long shoots, if these are in request, for vase decoration.

Spiræas.—Autumn-flowering kinds of the shrubby section should be cut hard back to secure neat and floriferous bushes. Those flowering in summer must not be pruned.

Trellis Roses.—If not thinned of old wood, this should be seen to at once, and at the same time the young shoots selected for this season's flowering. A good deal of wood may be left on the wichuraiana hybrids. After pruning, tie them neatly to the wires. Dress the ground with a compost, of which half at least should be of a manurial nature.

East Lothian Stocks.—Transplant seedlings into shallow beds of soil prepared in cold frames, the soil being made rather firm to induce the production of many fine roots, and allow 4 inches between the plants. They succeed best when rather under-watered, and, once re-established, enjoy abundance of air. Meanwhile keep the frames close.

Antirrhinums.—These, though small, should be transplanted from the seed-boxes into others, in which the plants will make better progress. I merely place half an inch of leaf-soil for drainage in the bottom of the boxes and 2 inches of compost above that. Two inches apart is quite wide enough to arrange them, and, till well established, to apply water dip the boxes into a tank, but not so deep as to flood the surface.

Indoor Fruit.

Early Peaches should be thinned to a number sufficient for a crop.

Peach Trees in all stages of growth should have the young growths arranged, just enough to fill the spaces left for them. Ply the syringe to keep away red spider.

Young Vines.—Material for borders should be got into theinery in readiness for planting the Vines three weeks hence.

Ventilating Vineries.—The sun does no harm provided the temperature rises gradually, which is assured by ventilating in the early morning to keep it steady, increasing ventilation with the greatest care, so that the cold air is not felt. It is essential to apply a slight shading of water and whitening to the glass if the heat cannot be otherwise regulated.

The Greenhouse.

Shading.—If the sun affects any plants injuriously, apply a slight shade. Herring-nets do well.

Fumigating.—The great changes of weather at this season encourage plant insects. Repeated fumigation is, on that account, essential, and is best as a preventive.

Carnations.—A selection of border varieties is very useful for summer flowering, Lady Hermione, the fancies and yellows, where appreciated, being extra fine if grown in pots for this purpose. A 7-inch pot is large enough for one plant, and an 8-inch or 9-inch for three plants. In Scotland they succeed best if grown under glass right on. Pot them up now.

Lapageria rosea and the white variety should be overhauled, the foliage washed with an insecticide and the straggling shoots tied neatly to wires. This plant is admirably adapted for roof covering, but does best when partially shaded.

Liliums.—Auratum and speciosum must now be seen to. Bought-in bulbs should be merely placed well down in the pots on the compost, with a little round the bulbs, and allowed to come away slowly of themselves, more compost being given as growth advances. Established auratums must not be shaken out at this time, but speciosums may. They make handsome specimens several in a 9-inch or 10-inch pot.

Palms.—Young plants requiring a shift should be potted now. Most Palms succeed in a rather light, fibrous loam, which keeps in good condition longer than peat or leaf-soil. Established plants of a suitable size for decorative purposes need only to have the surface freshened and watered with liquid strengthened with some manurial agent. Soot, superphosphate of lime, sulphate of ammonia and diluted cow-house drainings are all valuable. The foliage can be kept a deep green only by this means.

The Kitchen Garden.

Rhubarb.—Dig in a heavy dressing of half-rotted manure in the Rhubarb quarter. If old, take up a portion of the crop, divide the roots and replant 6 feet apart.

Seakale.—It is getting quite late enough to plant this fine vegetable. If the ground is ready, plant the thongs by means of a dibber. The tops should be slightly covered with soil, and if a few Radish seeds are scattered along the lines, they will serve later as marks to enable hoeing to be performed without damage to the Seakale.

Late Cabbages.—Strong autumn-raised plants may be planted out 2½ feet to 3 feet apart. Some time during the ensuing week sow more seeds of Dwarf Drumhead and Winningstadt, also of a large Savoy for kitchen use. Savoys may also be planted if they, too, were sown in autumn but it is not a profitable way to grow these.

Leeks.—Select a few of the best plants and transplant them to a position where they can ripen seed early, such as a south wall. If ground is needed for other crops, the whole of the remaining Leeks may be lifted and laid in at the north side of a wall, where they will remain in good condition till June. R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SEEDLING CARNATIONS (J. McL.).—Place in a cold frame, and towards the end of the month pinch back 2 inches of the tops of the plants to induce shoots to break from the stem lower down. As soon as a good break of young shoots is obtained, repot the plants into slightly larger pots, using good turfy loam with a light sprinkling of bone-meal added, and replace in the frame.

SWEET PEAS AND BASIC SLAG (J. H. Weaving).—It is quite clear that you are a generous man, and that you are determined not to let your Sweet Peas starve to death. By all means utilise the stations, as we do not think that the plants will suffer in the slightest degree; on the contrary, they will probably appreciate the food. We knew of a case where 7 lb. of superphosphate of lime to the square yard was advised instead of 7 oz. One man worked into his soil upwards of four pounds and saved the remainder for surface application. He grew the finest Sweet Peas he had ever had in many years of experience. You may take courage from this.

CLEMATIS AND VIOLAS (Gibson).—If your chief desire is a screen in so small a space as 12 feet in length, you would be well advised to confine yourself to one kind of Clematis only, and the variety we would suggest would be the early white-flowered *C. montana*. If, however, you desire to combine a flower fence that would presently also afford a screen, the varieties of *C. viticella*, and *C. V. rubra* in particular, would be one of the best. The ordinary *C. Jackmanii* is excellent for permanent planting, but all the Clematises would require a good deal of attention in training, regulating and pruning to provide anything like satisfactory results. Your 6-foot-high fence is not ideal for a plant like the Clematis, which loves to climb, and in doing so often shows its bare legs. Were you not in so great a hurry, some of the wihuraiana Roses or the showy American Pillar would be far better for the size and extent of the fence, and three or four plants of either of the latter would suffice. Of all the Clematises save the first-named, you would require fully twice that number to give immediate effect. All the plants could be obtained in pots, and the planting should be done forthwith. The Violas have probably no equal for the position you name, and two of the best in the shades you require are Maggie Mott and J. B. Riding, and both are excellent bedders.

FRUIT GARDEN.

LOGANBERRIES (J. McL.).—These should be pruned in the same way as Raspberries, namely, by cutting away (down to the ground) the old branches which had borne fruit last year, leaving only those branches to grow on which had been formed last year. It is these only which will bear fruit. Each plant should be tied to a pole 7 feet or 8 feet high, as the Loganberry grows to a great height when planted in good soil.

APPLES, DESSERT AND COOKING (J. M. L.).—The following will be found among the best, your land being poor and inclined to be hard. You should stir it up deeply and add half a barrow-load of rotten manure to the soil of each tree before planting, and after the tree is planted sprinkle thinly over the surface of the soil, as far as the roots extend, a little bone-meal, and fork it in afterwards 3 inches deep, afterwards placing a layer of manure 3 inches deep over the surface soil round the stem of the tree and over the roots. This will encourage the growth of surface roots, and the surface manure will find them and keep them there. Dessert varieties—Gladstone, ripe July and August; Devonshire Quarrenden, July and August; Worcester Pearmain, September; James Grieve, September and October; King of the Pippins, from October to Christmas; Cox's Orange Pippin, from November to February; Allington Pippin, November to February; Blenheim Orange, December and January; Lord Hindlip, January to May; Barnack Beauty, Christmas to February; Sturmer Pippin, March to June. Cooking Apples (these are given in the order of ripening)—Early Victoria, best Codlin; Lord Grosvenor, Grenadier, Golden Noble, Lord Derby, Bismarck, Encore, Lane's Prince Albert, Edward VII., Alfriston, Newton Wonder and Bramley's Seedling.

MISCELLANEOUS.

STERILISING SOIL WITH FORMALIN (M. L. M.).—About two pounds of commercial 40 per cent. formalin should be used to fifty gallons of water for sterilising soil. The soil should be subsequently well stirred and the formalin permitted to evaporate before it would be safe to sow seeds or transplant plants into it.

LAYING-OUT A GARDEN (J. B.).—We think the general arrangement quite good in the circumstances, and, so far as plot A is concerned, the better way would be to grass it down and strike out an oval bed for summer-flowering subjects, such as Antirrhinums, Penstemons, or even tuberous-rooted Begonias, if you could lighten the soil somewhat. In plot B, in addition to the Roses already planted, you might arrange a variety of hardy herbaceous plants—frises, Delphiniums, Michaelmas Daisies, single and double flowered Pyrethrums, hybrid Columbines, perennial Marguerites, Sweet Peas, Asters, Stocks, Poppies, Carnations and the like. Just what should be grown would depend very much on your own choice, and for this year at least, considering the nature of the soil and the fact that it stands in need of generous cultivation, you might well confine your attention to annuals. For example, unless you are sure that wireworm does not exist in the soil, Carnations should not be planted. With good cultivation such a soil would grow Roses well, and these may still be planted. In the vegetable plot you could only indulge the more serviceable kinds, as Peas, French Beans, Broccoli and the like, that are more difficult to obtain fresh in the usual way. For such things as Potatoes there would be no room.

NAMES OF PLANTS.—A. Bosc. — Rhododendron praecox.—Miss A. M. E. L., Abergavenny.—Iris japonica (syn. I. imbricata).—Mrs. C., Drogheda.—Narcissus pallidus praecox.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THERE was a magnificent display of spring flowers at the fortnightly exhibition of the Royal Horticultural Society held at Vincent Square, Westminster, on Tuesday, March 5. In addition to the blaze of colour created by Azaleas, Carnations and Orchids, there were numerous competitive classes for spring bulbs.

FRUIT AND VEGETABLE COMMITTEE.

Present: J. Cheal, Esq. (chairman), and Messrs. W. Bates, A. Dean, J. Gibson, W. Pope, W. Fyfe, J. Willard, W. E. Humphreys, A. R. Allan, A. Bullock, F. G. Treseder, W. Crump, G. Reynolds, J. Davis, W. H. Divers, G. Wythes, J. Harrison, A. Grubb, A. W. Metcalfe, Owen Thomas, G. Kelf and F. Perkins.

Messrs. Sattou and Sons, Reading, once again showed what could be done with vegetables at this season. The Broccoli were remarkable for their fresh and clear white appearance. The varieties of Broccoli shown were Snow White and Superb Early White. The former has well-protecting leaves, which tend greatly to improve the white heads. Mushrooms, Seakale and Lettuce were wonderfully well shown, and the centre of this interesting collection was occupied with variegated Kale in showy hues ranging from deepest purple to pale lemon in colour. Silver Knightian medal.

A silver-gilt Knightian medal, the highest award made by this committee was gained to the Duke of Rutland, Belvoir Castle, Grantham (gardener, Mr. W. Divers), for a highly meritorious collection of Apples. The fruits were well coloured and well preserved.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), Sir Jeremiah Colman, Bart., Lieutenant-Colonel Sir George Holford, and Messrs. J. O'Brien, H. J. Veitch, Guroey Wilson, S. H. Low, R. A. Rolfe, R. G. Thwaites, T. Armstrong, A. McBean, W. Cobb, J. E. Shill, J. Charlesworth, H. G. Alexander, J. Cypher, W. H. Hatcher, W. P. Bonnd, A. Dye, C. Cookson, W. H. White, C. J. Lucas, J. S. Moss and de B. Crawshaw.

An interesting collection of Dendrobiums was sent by Sir Jeremiah Colman, Bart., Gattou Park, Snrrey. The variety Lady Colman, purple, with deep maroon eye, came in for general admiration. All of the plants shown bore evidence of good cultivation, and reflected credit upon Mr. J. Collier, the able gardener.

The magnificent group of Orchids sent by Lieutenant-Colonel Sir George Holford, K.C.V.O., Westonbirt, Tebury, was equalled only by that which came from the same source a fortnight ago. Cattleyas formed the outstanding feature of this collection, and the centre of the group was occupied by a massive plant of Cattleya Trianae Hydra almost hidden with its profusion of blooms. Beautiful plants of *Laelia anceps schroderiana* and the yellow Odontoglossum Canary Bird were worthy of special mention in a group of exceptional merit.

Messrs. Armstrong and Brown, Tunbridge Wells, staged an extensive and in every way meritorious collection of Cattleyas, Odontoglossums and Cypripediums. The centre of this grand collection was composed entirely of Dendrobiums, the lovely white *D. nobile virgiale* being most conspicuous.

Messrs. Sander and Sons, St. Albans, had a collection notable for the many plants of botanical interest. The pendulous flowers of *Trichopilia naxis* and the arching sprays of *Dendrobium Hillii* (pale yellow) were greatly admired by Orchid enthusiasts.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, Middlesex, made a showy display with Cattleyas, *Phalaenopsis schilleriana*, *Dendrobiums* in variety and *Odontoglossums*. *Cologyne pumdata* (pale green, with jet black lip) was shown in good condition.

Messrs. James Veitch and Sons, Limited, Chelsea, staged a miscellaneous group of intense interest and the essence of good cultivation. Large and well-finished flowers of *Braudo-Cattleyas* and varieties of *Cattleya Trianae* were seen in the height of perfection, while *Odontoglossums* and *Cypripediums* came in for their full share of admiration, especially from the lady visitors. The deep plum-coloured *Pleurothallis Roezlii* was included in the group.

Messrs. Hassall and Co., Southgate, staged an admirable group of *Angraecum sesquipedale*, associated with *Cattleyas* and *Odontoglossums* in variety.

Messrs. Cypher and Sons, Cheltenham, had a small miscellaneous group comprising *Dendrobiums*, *Platyelasis*, *Masdevallias* and *Odontoglossums*.

FLORAL COMMITTEE.

Present: Mr. H. E. May (chairman) and Messrs. C. T. Druery, W. J. Bean, J. Green, T. W. Turner, J. W. Barr, R. C. Notcutt, G. Reuthe, F. H. Chapman, C. Bhek, J. F. McLeod, William Howe, J. Dickson, W. Bain, C. Dixon, Charles E. Shea, J. T. Bennett-Poe, W. P. Thomson, E. H. Jenkins, W. J. James, G. Paul, Charles E. Pearson, Rev. F. Page-Roberts, H. J. Cutbush, R. C. Reginald Neville, R. Hooper Pearson and J. Jennings.

Messrs. Barr and Sons, Covent Garden, displayed an interesting bank of Crocuses, both species and bedding varieties, with such other plants as *Saxifraga Elizabethae*, *S. apiculata alba*, *S. burseriana* magnifica, *S. Sancta*, *S. apiculata*, together with pretty colonies of *Iris reticulata*, *Muscari azureum*, *Sisyrinchium grandiflorum*, *Narcissus triandrus albus* and other interesting plants. Hybrid *Freesias* were very beautiful. The firm also made their first display of *Dafodils*, the lovely self yellow King Alfred appearing as a background to many seedlings, choice, novel and distinct.

Mr. Maurice Prichard, Christchurch, had a delightful lot of alpine, yellow and white *Saxifragas*, *Primula cashmiriana*, *Megasea Stracheyi* (lovely in colour), *Cyclamen Comu* and many other charming plants.

Messrs. G. and A. Clark, Limited, Dover, had an exhibit of alpine and shrubs, the group including *Polyanthuses* and *Primroses* in variety.

The Misses Hopkins, Shepperton-on-Thames, had a very charming exhibit of alpine on rockwork, *Gaultheria*, *Meconopsis*, *Hepatica*, *Thymes*, *Dog's-tooth Violets*, *Ramondias*, *Primroses*, *Fritillaries* and others, in conjunction with dwarf shrubs, all playing a part.

Messrs. Stuart Low and Co., Enfield, again arranged pans of *Cyclamen* in company with *Azaleas*, *Acacias*, *Correas*, *Camellias* and other plants. *Gerberas*, too, were freely displayed. The firm also staged excellent vases of Carnations, exhibiting plants in flower of their new Baroness de Brien to show the habit of growth and freedom of flowering. It is, we think, a variety of great merit.

Messrs. James Veitch and Sons, Limited, Chelsea, had superbly-grown examples of their giant white *Cyclamen*, also others of crimson and salmon. *Tillandsia Zehneri*, with scarlet-veined leaves and stems and yellow flowers, was conspicuous. *Cineraria Antique Rose*, *Narcissus Poetaz Elvira*, *Primula kewensis* and *Azaleas* were also noted.

Mr. C. Engelmann, Saffron Walden, had an extensive exhibit of Carnations, the chief of these being *Triumph (crimson)*, *Lady Northcliffe* (clear salmon), *Lady Meyer* (deep pink) and *Carola*.

Mr. Bertie Bell, Guernsey, showed his new variety *Coronation White Wonder* and Mrs. C. W. Ward.

Messrs. T. S. Ware, Limited, Feltham, had a delightful lot of alpine in pans, *Saxifragaria canadensis*, *Megaseas*, *Omphalodes otida*, *Rosmerinus officinalis prostrata*, *Trilliums*, *Anemones*, *Betula hyacinthina*, *Lithospermums* and *Saxifragas* in variety, among others, making a good show.

Mr. Clarence Elliott, Stevenage, had a charming rockery arrangement, displaying in bold, spreading carpet groups such things as *Saxifraga apiculata*, *S. oppositifolia*, *S. o. splendens*, *S. burseriana Gloria* (a gem in its way), *S. b. speciosa*, *S. Elizabethae* and many others.

Messrs. Caneoll and Sons, Swanley, had a lovely array of *Zonal Pelargoniums*, which they displayed in handsome bunches. *Arabic*, *Snowstorm*, *Saxona* and *St. Louis* being some of the more notable sorts. *Begonias* in many distinct kinds, *Cinerarias* and the rarely-seen *Isoloma hirsuta* were also on view.

Messrs. Young and Co., Cheltenham, had a lovely group of Carnations, displaying such as *Duchess of Devonshire*, intense crimson, and very fragrant; *Hon. Lady Neeld*, in the way of *Marmion*, and very free; *Lady Henderson*, a very handsome pink-flowered variety, and a coming flower; and *Mikado*, one of the most popular of the fashionable heliotrope shades of the moment.

Messrs. Paul and Son, Cheshunt, brought an extensive series of home-grown *Lilacs* in sturdy, well-flowered plants. All the leading commercial sorts were staged, and left no room for doubt as to their superiority.

Messrs. J. Carter and Co., Raynes Park, arranged a delightful spring terrace garden in flower and in grass. The lawn portion of the arrangement was ideal of its kind while the massed beds of Crocuses, of Hyacinths and Tulips were particularly fine. The background of conifers and other trees and shrubs, with an effectively-planted rockery arrangement in the foreground, added a further charm to a work unmistakably beautiful and very suggestive as a whole.

Mr. J. Dickson, gardener to Adeline Duchess of Bedford, staged a very fine lot of *Primula obconica*, the strain being of a high order of merit.

A massed bank of Azaleas from Mr. L. R. Russell, Richmond, with its dark background of Palms, was one of the features of the show.

Miss Willmott, Warley Place, showed *Corylopsis multiflora*, a greenish yellow flowered species of merit.

Messrs. R. Gill and Sons, Falmouth, exhibited a few examples of *Primula Winteri* and a glorious bank of hybrid *Rhododendrons*. *Iris stylosa* was also charming in this exhibit.

Mr. Pulham, Elsenham, had a small rockery exhibit prettily arranged with alpine and shrubs. *Anemone Pulsatilla alba* was very good.

Mr. G. Renthle, Keston, Kent, had a charming group of alpine and *Rhododendrons*, among which the *Saxifragas* were most beautiful. *Cyclamen*, hardy *Heaths* and the early *Narcissi* were all in pretty masses.

Messrs. R. W. Wallace and Co., Colchester, had a pretty rockery exhibit, arranging masses of *Primroses*, alpine rare species of *Tulips* and the choice and new *Fritillaria imperialis chitralensis*.

Mr. H. Burnett, Guernsey, arranged one of his superb exhibits of *Carnations*, *White Wonder*, *Sultan*, *Mrs. Raphael* and other notable varieties being noted.

Bakers, Wolverhampton, had a pretty group of alpine and spring flowers, all being in good condition.

Messrs. J. Peed and Sons, West Norwood, S.E., exhibited alpine and *Crocuses*.

Messrs. Allwood Brothers arranged *Carnations* in bowls, the new *La Rayonnante*, *White Wonder* and *Geisha* (mauve) being admirably displayed.

Mr. H. Ellison, West Bromwich, had a pretty display of *Gerberas* in many shades of colour.

Messrs. William Cutbush and Sons, Highgate, N., exhibited a fine lot of shrubs in flower, also a superb gathering of *Carnations*.

The Burton Hardy Plant Company, Christchurch, arranged a rockery exhibit, planting it freely with the choicer alpine.

Messrs. H. B. May and Sons displayed *Clematises* of the best varieties in groups, also *Azaleas* and other plants. *Thunbergia grandiflora* was a notable beauty in blue-mauve.

Messrs. Thompson and Charman, ourserymen and landscape gardeners of High Street, Bushey, Herts, erected a neat little rock garden, planted throughout with alpine flowers. Among the features of this exhibit were *Ranunculus cretensis*, *Androsace Laggeri* and *Corydalis densiflora*.

From the Guildford Hardy Plant Nursery came a meritorious collection of alpine in pots and many ornamental shrubs. Among the plants noted were *Polygala Chamæboxus* and *Primula denticulata*.

A grand lot of *Freesias*, blooming in great profusion, were sent by Earl Lytton, Knebworth, Herts (gardener, Mr. H. Brotherton).

Messrs. Carter Page and Co., London Wall, E.C., had a bright and glorious display of *Narcissi*, *Tulips* and *Hyacinths*, all grown in boxes of fibre.

Messrs. Whitelegg and Page, Chislehurst, Kent, had a charming little rock garden tastefully planted throughout with *Androsaces*, *Primulas* and the like.

Messrs. James Veitch and Sons, Limited, Chelsea, displayed a sumptuous bank of *Azaleas* in dwarf and half-standard examples. The plants were simply massed with the flowers, and arranged in conjunction with *Prunus*, *Wistaria*, and other things, made a most effective whole.

A beautiful corner group of flowering shrubs, chiefly *Camellias* and *Prunuses*, was staged by Messrs. William Paul and Son, Waltham Cross. It was a tastefully-arranged group, in which the double white and double pink *Peach* were shown to the very best advantage.

Messrs. W. Wells and Co., Limited, Merstham, had a glorious collection of *Carnations*, all up-to-date varieties. The new large white *Wodeneth*, sweet-scented and of splendid form, was shown in the height of perfection. Other notable varieties were *R. F. Felton*, *White Wonder*, *Pluto* (crimson) and *Merstham Beauty* (cherry red).

Mr. James Box, Lindfield, Sussex, had a pretty collection of alpine flowers, with ornamental and flowering shrubs in the background.

NARCISSUS COMMITTEE.

Present: E. A. Bowles, Esq. (chairman), Miss Willmott, and Messrs. A. R. Goodwin, F. Herbert Chapman, H. Smith, W. F. Ware, G. W. Leak, Joseph Jacob, A. M. Wilson, J. T. Bennett-Poe, H. A. Denison, G. H. Engleheart, P. R. Barr, W. A. Watts, C. F. Digby and C. E. Curtis (hon. secretary).

The work done by this committee will be reported in the Rev. Joseph Jacob's "Daffodil Notes" in our issue next week.

Messrs. Cartwright and Goodwin had a most interesting lot of *Daffodils*, *Cirelet*, *Weardale Perfection*, *Mervyn Long Tom*, *King Alfred*, *Glory of Noordwijk*, *Mme. de Graaff*, *Fairy*, *Lady M. Rosecan*, *Antocrat*, *Long-fellow* and others being well shown.

Mr. F. Herbert Chapman, Rye, showed a few vases of *Daffodils* in *Poeticus* and *Ajax* varieties, also some interesting *Triandrus* hybrids.

Messrs. R. H. Bath, Limited, Wisbech, showed *Hyacinths*, *Narcissus*, *Crocuses* and *Tulips* grown in fibre, the plants being particularly well done.

Robert Sydenham, Limited, Birmingham, had *Lily* of the Valley, *Tulips* and *Jonquils* in fibre.

Mr. Christopher Bourne, Bletchley, showed a wonderful lot of *Daffodils* in many choice and beautiful sorts.

Messrs. Sutton and Sons, Reading, arranged a most effective table of *Hyacinths* in semi-circular groups to show the effect of colour-harmonies and contrasts. Blue and bluish, deep blue and yellow, yellow and red, and two shades of blue were among the more conspicuous

COMPETITIVE CLASSES.

Class 3, eighteen *Hyacinths*, distinct: First, the Duke of Portland, Welbeck Abbey, Workop (gardener, Mr. James Gibson). This exhibit contained magnificent spikes of *King Menelik* (purple), *King of the Blues*, *Moreno* (coral) and *Perte Brillante* (pale blue). Second, F. R. Dixon Nuttall, Esq., Ingleholme, Preston, Lancs (gardener, Mr. J. H. Barker); third, Lord Howard de Walden, Audley End, Saffron Walden (gardener, Mr. J. Vert). This class was very well contested.

Class 4, twelve *Hyacinths*, distinct: This also was a popular and well-fought class. The first prize went to A. Hanson, Esq., Liverpool, with magnificent, strong and beautifully-finished spikes; second, the Marquis of Salisbury, Hatfield, Herts (gardener, Mr. H. Prime); third, Lord Hillington, Wilderesses, Sevenoaks (gardener, Mr. J. Shelton).

Class 5, six *Hyacinths*, distinct: First, R. Morrison, Esq., Liverpool; second, C. E. S. Bishop, Esq., Norton Priory, near Chichester; third, the Earl of Lytton, Knebworth, Herts.

Class 6, four pans of *Hyacinths*, ten roots of one variety in each pan: In this class the Duke of Portland was again successful, carrying off the first prize with a truly grand collection; second, the Marquis of Salisbury; third, His Excellency the American Ambassador, Amphyll, Beds (gardener, Mr. G. Mackinlay).

Class 7, collection of 100 *Hyacinths* in twenty named varieties: Messrs. R. and G. Cuthbert, Southgate, were the successful exhibitors in this class. The spikes shown were of first-rate quality. The same exhibitors carried off the first prize for 120 *Hyacinths* in twelve varieties in pans. These two classes were open to trade growers only, and the gold medal of the General Bulb Growers' Society of Haarlem was awarded in each class to the successful exhibitors.

Mr. Robert Sydenham's classes for bulbs grown in moss-fibre attracted a good deal of interest, and competition was good.

Class 9, six single *Hyacinths* to be selected from a given list: First, Miss E. M. Rawlins, Northampton; second, Lady Tate, Streatham Common (gardener, Mr. W. Howe); third, Miss C. A. Michell, Cricklewood, N.W.

Class 10: Lady Tate was first for six vases of *Tulips* grown in fibre, followed by the Hon. Mrs. Guy Baring, Berkeley Square, W. The best varieties shown were *Prince of Austria*, *Keizerskroon* and *Duchesse de Parma*.

Class 11, six vases of *Narcissi* grown in fibre: First, Miss C. A. Michell, with capital bowls of *Emperor*, *White Lady* and *Larifer*; second, Lady Tate; third, Miss E. M. Rawlins, Great Houghton Hall, Northampton.

NARCISSUS AND TULIP COMMITTEE'S AWARDS.

Silver-gilt Banksian Medal.—To Messrs. R. and G. Cuthbert, Southgate, for *Tulips*.

Silver Flora Medals.—To Mr. C. Bourne, Bletchley, for *Daffodils*; Messrs. Cartwright and Goodwin, Kidderminster, for *Daffodils*.

FLORAL COMMITTEE'S AWARDS.

Awards of Merit.—To *Azalea Blushing Bride*, from Messrs. Veitch, Chelsea; *Rhododendron Corubia*, from Messrs. Gill, Falmouth; *Corylopsis multiflora*, from Miss Willmott, V.M.H.; and *Pteris Parkeri*, from Messrs. Parker, London, N.

Silver-gilt Flora Medals.—To Messrs. Carter, Raynes Park, for spring bulb garden; and Messrs. Veitch, Chelsea, for greenhouse plants and *Azalea indica*.

Silver-gilt Banksian Medals.—To Mr. L. R. Russell, Richmond, for *Azalea indica*; and Messrs. Sutton, Reading, for *Hyacinths*.

Silver Flora Medals.—To Mr. H. Burnett, Guernsey, for *Carnations*; Messrs. Cutbush, Highgate, for *Carnations*, *Hyacinths*, &c.; and Messrs. W. Paul, Waltham Cross, for flowering *Peaches* and *Almonds*.

Silver Banksian Medals.—To Messrs. Barr, Covent Garden, for hardy bulbous plants; *Adeline Duchess of Bedford* (gardener, Mr. J. Dickson), *Rickmansworth*, for *Primulas*; Mr. C. Elliott, Stevenage, for alpine; and Messrs. May, Edmonton, for *Ferns* and *Clematis*.

Bronze Flora Medals.—To Mr. C. Engelmann, Saffron Walden, for *Carnations*; and Messrs. S. Low, Enfield, for greenhouse plants and *Carnations*.

ORCHID COMMITTEE'S AWARDS.

Awards of Merit.—To *Dendrobium Golden Ray superba* (D. *Othello Colmaux* × *signatum aureum*), from Sir Jeremiah Colman, Bart.; and *Odontoglossum Jasper*, from J. S. Moss, Esq., Waltham.

Gold Medal.—For a group, from Lieutenant-Colonel Sir George Holford, K.C.V.O.

Silver-gilt Flora Medal.—For a group, from Messrs. Armstrong and Brown.

Silver Banksian Medals.—For groups, from Messrs. James Cypher and Sons, Messrs. Hassall and Co., Messrs. Sauder and Sons, Sir Jeremiah Colman, Bart., and Messrs. Stuart Low and Co.

Silver Flora Medal.—For a group, from Messrs. J. Veitch and Sons, Limited.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

THE tenth meeting of the winter session was held in the County Laboratories on Friday, the 1st inst. Mr. E. B. Christy, the president, presided, and about fifty members were present. Previous to the lecture an exhibition of forced bulbs was held. The flowers were very good, and included *Hyacinths*, *Tulips* and *Narcissus*. The following were the awards: First, Mr. Hunt; second, Mr. Rymer; third, Mr. Russell. Mr. F. W. Harvey, Editor of THE GARDEN, gave a lecture on "The Making of a Horticultural Journal." The lecturer

explained, with interest, the various stages through which a journal had to pass before it was ready for sale, and explained in detail such processes as type-setting and block-making, especially the art and process of printing coloured plates of flowers and fruit. The lecture was made exceedingly interesting, because Mr. Harvey brought with him specimens of blocks in their various stages of completion, also articles as corrected and ready for press, and examples of corrected proofs. A vote of thanks to the lecturer concluded the meeting.

United Horticultural Benefit and Provident Society.—The annual meeting of this society will be held at the Royal Horticultural Hall, Vincent Square, Westminster, S.W., on Monday, March 11, at 8 p.m. Mr. Charles H. Curtis will preside.

Perpetual Flowering Carnation Society.—Two exhibitions have been arranged for this year, to be held in the Royal Horticultural Hall, Vincent Square, S.W. The first will take place on March 21 and 22, and the winter show is fixed for December 3 and 4. A capital schedule has been drawn up, and there is every reason to anticipate a first-rate display of bloom at the spring show, which is now so rapidly approaching.

National Chrysanthemum Society.—The list of members, together with the schedule of prizes for this year, are now ready for distribution. The early autumn exhibition and the great autumn exhibition and fête are arranged for at the Crystal Palace, the former on October 2 and 3 and the latter on October 29, 30 and 31. The last exhibition of the year will be held at Essex Hall, Strand, on November 20. Copies of the schedule may be obtained from the secretary, Mr. R. A. Witty, 72, Savernake Road, Gospel Oak, London, N.W.

Examination of Employes in Public Parks.—The result of the Royal Horticultural Society's examination of employes in public parks, held in January of this year, has just been published. Forty-nine candidates entered, and of these seventeen secured places in the first class, seven in the second and sixteen in the third, leaving eight who failed to satisfy the minimum requirements of the examiners and one who was absent. The examiners report that the average quality of the written answers equals that of former years. The identification of specimens in the viva voce section was better, the names being generally given unhesitatingly and correctly. The first place was secured by Mr. F. J. Nash, 44, Meynell Road, Leicester.

The Development of Forestry.—The Right Hon. Walter Runciman, M.P., President of the Board of Agriculture and Fisheries, has appointed a Committee to advise the Board on matters relating to the development of forestry. References will be made to the Committee from time to time as occasion arises. The Committee will be asked in the first instance: (1) To consider and advise upon proposals for a forestry survey; (2) to draw up plans for experiments in silviculture and to report upon questions relating to the selection and laying out of forestal demonstration areas; (3) to advise as to the provision required for the instruction of woodmen. The Committee is constituted as follows: Sir Stafford Howard, K.C.B. (chairman), Mr. F. D. Williams-Drummond, Sir S. Eardley-Wilmot, K.C.I.E., the Right Hon. R. C. Munro-Ferguson, M.P., Lieutenant-Colonel D. Prain, C.M.G., C.I.E., F.R.S., Mr. E. R. Pratt (president of the Royal English Arboricultural Society), Professor Sir W. Schlich, K.C.I.E., F.R.S., Professor William Somerville, D.Sc., and the Hon. Arthur L. Stanley. Mr. R. L. Robinson, of the Board of Agriculture and Fisheries, will act as secretary.

THE GARDEN.

No. 2104.—VOL. LXXVI.

MARCH 16, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Hyacinths Flowering Early.—It may be interesting to record the early date at which ordinary hedding Hyacinths are commencing to flower outdoors this year. In several gardens in Essex we noticed white and blue varieties fully open on Sunday last, the 10th inst., notwithstanding the fact that in one garden the bulbs were not planted until early December. The gardens in question are not very sheltered, and the locality is not usually an early one. The old double Daffodil has been out for several weeks, and Golden Spur has just opened; but other varieties are still in the bud stage.

The Rock Garden at Edinburgh Royal Botanic Gardens.—Those who were acquainted with the old rock garden at the Edinburgh Royal Botanic Gardens can best appreciate the changes which have taken place there and the great extensions of the cultivation of alpine flowers which have been carried out under Professor Bayley Balfour, the Regins Keeper of the gardens. In lieu of the formal rockwork, bold arrangements of rockwork have been substituted and the alpines planted in blocks of a kind. These extensions are yet in progress, and a still further improvement is noticeable, although some critics appear to think that the grass part is being too much encroached upon. The rock garden is one of the most popular parts of the gardens, and Professor Bayley Balfour is always adding some good new or rare plants, which are of great interest to cultivators of such flowers.

Forsythias and Chionodoxas.—A very pretty combination was noted recently by the use of *Chionodoxa Luciliae sardensis* as a groundwork for *Forsythia suspensa*, the golden flowers of the latter plant serving as an effective contrast for the rich blue carpet of *Chionodoxa*. This and other combinations of a similar character are well worth copying in gardens where they do not already exist, for both plants are inexpensive, and by growing the two together, no harm is done to either. The *Chionodoxas* have the advantage of perfecting their growth at an early date; therefore the leaves may be removed early and a surface-dressing of manure applied to the shrubs when necessary about the time they are breaking into vigorous growth. It is surprising how bulbs like *Chionodoxas* increase in numbers when growing beneath shrubs, and it is possible about every third year to fork the beds over and pick out many of the larger bulbs to use elsewhere, and still leave sufficient in the ground to create a good display the following spring. This and other *Chionodoxas* may also be used with good effect in combination with red-stemmed kinds of Dogwood.

Trees Suitable for Experimental Forestry.

The current issue of the *Kew Bulletin* contains an interesting article by Mr. W. Dallimore on trees suitable for experimental forestry. The article is the third of a series, the others being published last year, and is devoted to American conifers. Until quite recently these trees have only been planted for ornamental purposes in this country; hence it is difficult to determine their value for forestry. Several, notably the Deciduous Cypress, *Taxodium distichum*, and Lawson's Cypress, *Cupressus lawsoniana*, will, no doubt, prove suitable for planting under certain conditions, and all these conifers are well worth consideration by those who are intending to plant forest trees. The *Kew Bulletin* is published by Wymans, Limited, price 3d.

The Italian Maple.—Among the various Maples which bear showy flowers, *Acer opulifolium*, the Italian Maple, is one of the most conspicuous, for it blossoms in March and produces its clusters of yellow flowers with the greatest freedom. A native of Europe, it grows into a medium-sized tree 25 feet to 40 feet high, with a rounded, wide-spreading head. The leaves are less deeply lobed than those of the Sycamore, and their shape has been likened to that of the leaves of the Guelder Rose. The flowers are borne, twenty or thirty together, in axillary and terminal clusters, each blossom being slightly pendent from a slender stalk an inch long. *A. opulifolium* is an excellent shade tree suitable for planting on a lawn; but perhaps its best position is as a specimen tree in parkland. This and other species might well be more widely employed in our public parks.

A Beautiful Japanese Shrub.—A fine bush of *Stachyurus præcox* is at the present time covered with drooping racemes of pale yellow flowers in the small enclosed garden which surrounds King William's Temple at Kew. It is easily one of the most distinct and ornamental of the numerous March-flowering shrubs, and it is a pity that it is not more generally grown. Belonging to the Order Ternstroemiaceæ, it differs widely from many other genera included in the Order—*Camellia*, *Stuartia* and *Cleyera*, for instance. The deciduous leaves are more or less ovate in shape, and are produced on rather slender, reddish-barked branches. The inflorescences are from the side buds on the previous year's shoots. They form during early autumn, and the flowers commence to open any time between the middle of February and the end of March, according to weather conditions. The racemes, though often but 2½ inches or 3 inches long, sometimes exceed 4 inches in length, with the small yellow flowers arranged closely together. *S. præcox* appears to be at home in light soil such as will grow Heaths well, for the specimen alluded to is growing in companionship with certain Heaths and Heath-like shrubs.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Annual Larkspurs.—In reply to "An Amateur" in your issue for March 9, page 118, I may say that "the old-fashioned, tall, single-flowered Larkspurs," of which she is so greatly enamoured, grow with me as freely as weeds, and have so grown for the past twenty years. If "An Amateur" will favour me with her name and address, I will send her a few plants some time next month, when they begin to show themselves and get large enough for removal.—W. BOOTH, *Howsham, Lincoln.*

Roses Making Early Growth.—I do not know when Roses have been so forward in growth as they are this year, and the new shoots seemed to burst out quite suddenly. Already some are asking whether it would not be wise to prune at once; but others, the more prudent old Rose-growers, prefer to "bide a wee," because they know we have to experience the Blackthorn winter yet, and if pruned now the dormant eyes will not remain so very long. The work of pruning ramblers might be got on with. Do not forget to cut the lateral growths back severely, the very weak ones to one or two eyes, and the stronger laterals longer in proportion. After doing this, retie the plants and spread them out as much as possible to admit light.—P.

Colour-Schemes for Flower-Beds.—During the next month many will exercise their minds as to what shall be grown in certain beds and what shall be associated or kept distinct. It might be helpful if now and again a reader of THE GARDEN would send any simple but effective arrangement of plants in bed or border to the Editor for publication, if he thought it worth while to do so. Of course, I do not here mean what is usually termed "the summer bedding." I think one of the most glorious shows (and yet free from garishness) I have ever seen was a border of Sutton's Pink Beauty Sweet William, among which were planted three shades of Canterbury Bells, white, lavender and purple. The effect was truly exquisite. Let anyone try it. We are to repeat the experiment next year. Another pretty effect is obtained by sowing *Linum rubrum* among a fair-sized patch of the common garden Musk. The groundwork of these little yellow flowers improves the appearance of the *Linum*, while it also helps to keep the roots of the latter cool and moist, a condition they appreciate in the hot weather. Finally, another handsome bed is obtained by carpeting a bed of *Diplacus glutinosus* (often known as *Mimulus*) with white, pale yellow, blue and lavender *Violas*. The large coppery flowers of this greenhouse shrub make a most pleasing contrast to the *Violas*.—C. TURNER, *Highgate*. [We shall at all times be pleased to receive notes on beautiful plant combinations, and we hope other readers will follow Mr. Turner's example.—ED.]

Saxifraga longifolia.—I do not think it would be possible to conceive anything finer than the handsome inflorescence of the above plant appearing in the illustration on page 103 of THE GARDEN for March 2. Judged by the diameter of the rosette and the magnitude of the spike as given in inches, it constitutes somewhat of a record, of which your correspondent M. E. Heinrich might be justly proud. Not only is there mere size depicted, but that degree of proportion in the spike which

is quite rare. For example, a large number of plants at their flowering exhibit a spareness at the base of the stem, few, if any, lateral spikelets appearing at this point. In the plant seen in the picture the lowest flowering sprays spread out and crowd down upon the rosette of leaves, and from this point to its summit the inflorescence is a well-formed, well-graduated column which must have been goodly to look upon. One cannot but congratulate your correspondent on having flowered so fine an example, although he appears to be somewhat sad in having to part with it as the result of so good a flowering. Mention is made of the plants flowering after "eight years' growth," while lower down it is stated that most of the plants flower "at a much younger age." Seedlings of this Saxifrage, like all other seedlings, vary in their early growth and development, some running away to a precocious flowering, and others remaining for years without making any progress. The greatest sluggards are the collected plants that are more than half grown when collected, and such as these often remain stationary for a year or two, and finally give but a moderately good account of themselves when they flower. This, of course, is the direct outcome of root sacrifice when the plants are dug or torn up in their native home, the veriest stumps remaining, often enough, when received.—E. H. JENKINS.

A MIRACLE.

Some little bulbs, all dry and round,
Were buried in the cold brown ground,
And there, almost forgotten, lay
Through many a bitter winter's day.
Unseen, unheeded, still they grew;
Till spring returning, yet anew,
When through the soil at first were seen
Some tiny, tender spears of green.
Then, suddenly, there burst to view
The flowers, of lovely shape and hue.
Behold! a miracle! and true.

C. M. P. D.

Primula denticulata.—A good deal more attention might be given to the cultivation of this hardy Himalayan *Primula*. As a spring-flowering plant it is invaluable in the early border, and the effect when grown *en masse* in good soil enriched by manure is very beautiful. It is a robust grower and sends up strong, erect stems, carrying large rounded heads of many sessile flowers densely crowded together. The flowers come up before the leaves, which are flat. The plants are sometimes slightly covered with farina. A few pence will purchase enough seed to raise hundreds of plants, and the grower will be rewarded by having in flower the following year plants bearing heads of flowers ranging in colour through all shades of lilac to the purest white. Some of them will equal in appearance the so-called named varieties. *P. Henryii* and *P. pulcherrima* advertised in catalogues are only strong-growing, good-coloured forms of *denticulata*. The individual flowers of *erosa* (Fortune's Primrose) are stalked. It is a very inferior *Primula* for garden decoration. The leaves of *cashmeriana* are longer, more convex, and paler green in colour than those of *denticulata*. The whole plant, practically speaking, is densely covered with a white mealy powder, which adds much to its beauty. The catalogued *cashmeriana Ruby* is specially fine, one of the most lovely-coloured spring flowers I know, and sure to fill everyone with admiration when once seen. *Cashmeriana alba* has a poor appearance compared

with *denticulata alba*. The white, apart from being not so good, does not show up so well against the densely-powdered leaves as in the latter, which are very slightly, if at all, farinose, and of a much deeper shade of green. *Cashmeriana* × *rosea* have produced a hybrid called *Sübtitzii*, which bears lilac flowers instead of the exquisite red of *rosea*. The name alone seems quite sufficient to deter anyone from ordering it.—JOHN MACWATT, *Morelands, Duns*.

The Value of Hop Manure.—"A. D.," on page 103, March 2 issue, raises a point of very great importance to the small amateur and the shortage of animal manure and its substitutes. Two years ago, having to obtain manure in a hurry, I ordered 1cwt. of Wakeley's Hop Manure (which, incidentally, arrived the same night), and I found the stuff clean to handle and economical so far as it went. My personal view is that you could use it with advantage more freely than stated in the directions, with good results. The material is damp, but not sodden, so that you do not pay for an excessive amount of water, and undoubtedly it is a basis of Hop waste treated with manurial substances. Treating the subject broadly, the amateur should leave no likely quarter unturned before forsaking natural manures. His dairyman and any of his tradesmen who keep horses (and the cycle carrier and motor are narrowing the circle each year) should be approached, and in small neighbourhoods I know that children eagerly earn a few pence by the aid of a bucket and shovel. This material is raw, and may be dangerous unless mixed with milder ingredients, so that it behoves all town gardeners to husband their supplies of green rubbish to tone down the whole. It cannot be too firmly insisted that a pit into which all soft rubbish can be pitched, sprinkled generously with soot and unslaked lime to sweeten it, and turned occasionally, will eke out the manure supply in a wonderful manner. Add to this horse or cow manure in small quantities when obtainable, and you have a sound article of great value for use when trenching or bastard-trenching. For top-dressing I can think of nothing, other than old hot-bed manure, to equal Wakeley's Hop Manure, and for ladies it is ideal, being clean and pleasant in use.—H. R. GREEN, *Holm Cot, Buckingham Road, South Woodford*.

—For twelve years I have experimented with spent Hops as received from the brewery, and I consider that in many respects they are superior to farmyard manure. I have proved by analysis that they contain about an equal percentage of nitrogen, phosphates and potash, and, being much lighter in texture, they are more easily incorporated and remain longer in the soil than either horse or cow manure, especially so in light, sandy soil. They also retain the moisture better. Unless the advertised Hop manures are deprived of moisture and strengthened by the addition of concentrated fertilisers, I fail to see that they can be better than the ordinary spent Hops. Under the Feeding and Fertilizers Act every purchaser of any patent manure can demand that the seller shall give him a guaranteed analysis showing the actual percentages of nitrogen, phosphates and potash contained in the article as sold; not the percentages as contained in the material after the moisture has been driven off. Brewers' spent Hops contain in their natural state from 70 per cent. to 85 per cent. of moisture. Even hydraulic pressure does not reduce this below 40 per cent.—J. L.

Coleus thyrsoideus.—I saw a nice batch of this now-popular plant in an old Scottish garden conservatory the other day, and was gratified to see it among older winter-flowering plants in such a flourishing condition. In this garden it is found very useful for winter, and in a place where flowers and plants for decoration are much required its value was very apparent. I can recollect when it was introduced in 1897 and the pleasure with which I first observed its fine blue flowers on good plants. I think we have improved in its cultivation since then, and the plants I saw in this old garden were of exceptional quality.—M. D.

The Moccasin Flower.—In the autumn of 1908 I took from the open ground a plant of *Cypripedium spectabile* with the intention of sending it to a flower show in the following year, and planted it in a wooden box 24 inches by 15 inches by 8 inches deep. The soil was a calcareous loam, with a fair admixture of peat and leaf-mould, and copious waterings were given during dry weather. The plant had then five crowns. The wooden box seemed to suit it admirably, for it grew at once at an amazing rate, the fleshy rootlets appearing in all the chinks of the box where the wood had shrunk. In winter the box was left outside, and was merely covered with a layer of Pine boughs. In 1909 there came nine flowering stems; 1910, thirteen; and last summer, nineteen, of which two bore twin flowers. Last season the photograph was taken, and it is easy to see that the plant is in robust health. It is to be regretted that so beautiful a subject, and one so easily grown, is still so comparatively rare in gardens. We so often hear the question asked, "What shall I plant in my shady garden?" Why! here is something for you to suit such a position admirably.—E. HEINRICH, *Planegg, near Munich, Bavaria.*

A Pretty Greenhouse Plant.—

How seldom do we see any reference now to the *Diosmas*, graceful South African flowering plants, which have been for many years in cultivation! Quite recently I came across a nice batch of the elegant *Diosma ericoides*, one of the prettiest of the genus, and one which has been in cultivation since 1756. As a decorative plant for the conservatory and greenhouse in the early months it is invaluable, as it harmonises well with the other plants of the time, and the foliage is always acceptable, the fragrance also appealing to a good number of people. This species is well named *ericoides*, from the Heath-like appearance of the foliage. It is very graceful indeed, while in February and onwards the small white flowers, with a little tinge of red, add to its beauty. The plants I saw recently were in the conservatory, and were well grown and about three feet high in small pots. In association with *Cinerarias*, *Camellias*, winter flowering *Begonias*, *Lilium longiflorum Harrisii* and other subjects, they helped to make a good conservatory highly attractive.—A. M. D.

Saxifraga longifolia.—I was much impressed by the appearance of this Saxifrage in the excellent illustration in your issue of March 2, page 103. For a period of about ten years I had charge of a fine collection of Saxifrages, and I can confidently recommend readers of THE GARDEN to cultivate more of these plants. They are chiefly regarded as rockery plants, but nearly all mine were grown in borders as a groundwork to *Magnolias* and flowering shrubs. The effect was charming. The flowers of many varieties last a long time when cut and placed in vases.—SHAMROCK.

Lilacs on their Own Roots.—"H. P.," page 102, in March 2 issue, refers to Lilacs doing well on their own roots. I, too, have noticed many plants that have flowered very freely on their own roots.



THE MOCCASIN FLOWER (*CYPRIPEDIUM SPECTABILE*) IN A BAVARIAN GARDEN.

The suckers, when a few years old, flower as well as the branches from the main stem. I must say, however, that if plants on their own roots are allowed to grow without certain training or restriction, they become straggly in appearance, as some branches will grow almost horizontally.—B.

FORTHCOMING EVENTS.

March 19. — Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster. Lecture at 3 p.m. by Mr. H. B. May, on "Ferns."

March 21. — Perpetual Flowering Carnation Society's Show at Vincent Square (two days). Manchester Orchid Society's Meeting.

March 22.—Oldham Spring Show (two days).

THE ROSE GARDEN.

PRUNING ROSES FOR BIG DISPLAYS.

AS the time for pruning has arrived, it may not be out of place to ventilate the subject of moderate pruning of Roses for garden decoration a little, as it is a very great stumbling-block with many amateurs. There are people who are fond of going to the extreme, some by cutting their Roses down to the ground every year, others in just snipping off the tips of the shoots and nothing more. Now, if we can obtain grand Roses from huge plants of *Maréchal Niel*, why is it necessary to cut down, say, *Maman Cochet*, almost to the ground-line? Should we not rather plant such Roses against fences or walls where they may develop more growth, as seems to be their natural desire? I have seen huge plants of this Rose upon a wall, and even in beds, where they were left practically unpruned, and the growth has surprised me. There have also been fewer of the split or divided blooms we constantly meet with upon hard-pruned plants.

I know I shall be told that if we did not prune such Roses the frost would do the work for us. Of course, I fully admit that we run this risk, but am still of opinion that a much more rational system in pruning our garden Roses, at least, might prevail.

Now, I do not wish to be misunderstood. Even with garden Roses, or Roses planted for decoration, it is essential to keep up a supply of vigorous basal growths, and this can only be obtained by removing annually some of the old growths quite down to their base. I have seen huge bushes of *Grace Darling* and *Mme. Abel Chatenay* attain a height of 6 feet to 7 feet, quite gawky-looking objects, that gave direct evidence of neglect in this respect, because, if taken in hand earlier, they would have been nice shapely bushes and with a vigour of basal growth that betokened a healthy state. What I do condemn is the reckless cutting back of the fine ripened growths produced last year. Instead of pruning these hard, they

should be retained from 10 inches to 12 inches long in the case of Roses of the *Caroline Testout* type, but all decrepit growth, of course, should be cut away.

Many Roses, like *La France*, plainly resent the knife, and I would advise all who have hitherto failed with this Rose to give it a rest-cure as far as pruning is concerned.

Another point I should like to emphasise is that Roses of the *J. B. Clark*, *Hugh Dickson*, *Mrs. Stewart Clark* and *Gloire Lyonnaise* type are best grown as pillars, and they need plenty of space. *J. B. Clark* is a terror when growing in a Rose-bed. I have had to dig it out more than once, for it completely usurps all the surrounding space. But such a grand Rose has its uses, and it should

be grown upon trellis-work formed with Bamboo canes or against poles. I give these few ideas in the hope that some amateurs may relate their experiences. I do not invite exhibitors to do so, because I know what they would say; but, thank goodness, Roses are not grown for exhibition only. P.

THE FLOWER GARDEN.

A BEAUTIFUL JUNO IRIS.

THE beautiful *Iris stenophylla* belongs to that charming group of early-flowering species designated by the name of Juno Irises. Since the beginning of February it has been producing a succession of flowers in the Alpine House at Kew, and at the end of the month there were several in full beauty on a sunny border. Very welcome are these little bulbous plants at this time of the year, when there is little else in flower than Snowdrops and Winter Aconites. At the present time several members of this family are in bloom, including the beautiful yellow-flowered

in Asia Minor, whence we get so many of our early-flowering bulbs.

The culture of this and the others mentioned presents no great difficulty. A warm position on a south border, slightly raised, planted in light, loamy soil that is well drained, suits them best, while it is an advantage to mix plenty of pulverised bricks and old mortar rubbish with the soil. All Irises of the Juno group produce thick, fleshy, permanent roots, which serve the purpose of store-houses of food. They penetrate deeply into the soil, so that an open, well-drained medium is necessary for their well-being. For culture in pots they make charming subjects, and can be seen to better advantage with the shelter of a cold house. W. J.

SWEET PEA NOTES.

Plants in Frames.—There will be wide differences between the Sweet Peas now in frames. The autumn-sown seeds will, of course, have grown into splendid plants, and, could one be perfectly sure of the weather, they would be better in their permanent positions than where they are now; but "discretion is the better part of valour" very often, and I would remind over-eager planters of the

been remarkably good this season, so far as my experience goes, and it is the exception rather than the rule to find a blank, so that the prospects up to the present are decidedly pleasing and satisfactory. Let these youngsters be grown as hard as possible. If the pots were placed in a warm greenhouse to encourage vegetation, a system with which I fully agree, the earlier the seedlings can be transferred to frames the better, as they can be given more fresh air therein, and, in addition to that, the liability of becoming drawn towards the light is substantially reduced. The soil in the pots ought to be kept regularly moist, and great care must be exercised in this matter, as extremes in either direction cause a check to advancement, from which the plants fail, in some instances, fully to recover.

Outdoor Sowing.—The man who wants an abundance of Sweet Peas for cutting cannot do better than sow seeds out of doors between the present date and the middle of April. Neither autumn nor spring sowing in pots or boxes under glass will bring him a scrap more pleasure; on the contrary, there is an undeniable possibility that the results from such a system will be vastly inferior. From outdoor-raised plants one may not secure blooms of quite such large size and the stems will not all be 20 inches or more in length, but, after all, does that matter? Does the lady of the house measure each standard with a view to securing the biggest when flowers are being cut to adorn the dinner-table or the drawing-room? Does the same lady hanker after stems 18 inches or 2 feet in length? My decided answer to both of these questions is "no." The essentials for decorative purposes are freshness, artistic poise of the blooms on the stems, beautiful colour and a stalk varying from 10 inches to 15 inches in length. Given these, the capable decorator will make a charming arrangement. Then, again, do rows or clumps of pot-raised plants create a finer display in the garden? Can the mutilated specimens lashed securely to hop poles compare in beauty to a line or a clump of plants from outdoor-sown seeds? Once more I am forced to answer in the negative. The amateur should provide deeply and thoroughly cultivated soil that is not excessively rich, and sow his seeds in rows or clumps, according to his fancy in that matter, and it is almost certain that he will be delighted with the results. There are still thousands of amateurs who never think of exhibiting, so the charm of the Sweet Pea as a decorative garden flower is not yet likely to be lost. In sowing, set the seeds 2 inches or 3 inches apart on the firm bottom of shallow drills, covering the black seeds 1 inch or so and the white and spotted wrinkled seeds scarcely at all. When the seedlings appear, and it is clear which are the most favourable plants for retention, thin out the others so that the plants stand 6 inches or 8 inches asunder for blooming. The row will become a glorious hedge and the clump will be a clump in every sense of the word, and from the plants bushels of flowers will be cut before the season is over. It is for such purposes as this that the old-fashioned varieties so keenly admired by a recent writer in *THE GARDEN* are most particularly adapted. HORACE J. WRIGHT.

CROCUSES IN GRASSLAND.

THE Crocus is one of the most accommodating bulbous plants for planting in grassland, and at the same time one of the most charming. In the first place, it continues to grow vigorously



ONE OF THE JUNO IRISES: I. STENOPHYLLA.

I. Danfordia, the golden-netted *I. reticulata* and its earlier purple-flowered variety *Krelagei*, *I. Tauri*, with violet purple flowers, the falls of which are marked with golden lines, and the subject of this note and illustration.

I. stenophylla, sometimes known as *I. Helldreichii*, has lovely large flowers nearly four inches across, borne on a stem between three inches and four inches high. The standards are of a soft blue shade, while the falls are intense blue in colour, bordered with white. Its native habitat is

disasters which happened last year in the early days of April. By all means stand the pots out of doors where the plants have a modicum of protection from cold, where the birds can be prevented from topping the shoots too frequently, and where they will make hardier and sturdier progress than in the frame, which has to be occasionally shut for the benefit of other occupants.

There will be, too, the smaller seedlings from January and February sowings to take into consideration. The germination of seeds has

for many years, even where a dense turf exists, a condition which is fatal to the well-being of the Snowdrop and various other bulbs of small stature; then it finishes its growth at an early date, which is beneficial in various ways. First, by completing its growth early there is little possibility of drought intertering with its development, an important item when growing on tree-covered banks. Secondly, the leaves may be mown off with the grass about the middle of May, and if necessary the grass can be mown with a machine from that period onwards. Thirdly, they blossom earlier than the Narcissi, and thus help the advance of spring, while their comparatively low stature fits them for positions where coarser-growing subjects would be out of place.

On Mounds and Banks.—Perhaps the most suitable positions for plantations of Crocus are grassy banks or slight elevations which terminate a vista, for in such cases the blaze of colour made by the flowers can be seen from a considerable distance, the effect being better than when the bulbs have been planted on level ground. After the selection of the position, however, care must be taken in the actual planting if the effect is to be a pleasing one. Anything in the nature of formality must be avoided, for hard lines are a great defect. So is the method of planting in circular clumps to be condemned, for that is quite as bad as having straight lines. The more irregular a plantation can be made the better. Let large clumps be broken up by small patches of bulbs or by open spaces of grass, with an odd Crocus here and there, and about the margins let odd bulbs and small clusters stray some distance from the main body. All such arrangements tend to create a free and natural effect, which is really the idea to be aimed at.

Colour Effects.—The question of colour needs some consideration. Large stretches of orange-coloured varieties are very effective planted alone, while orange and white varieties also give good results. Whites, lilacs and pale purples provide a good display, but deep purple varieties are less useful. It is only in certain lights that they are seen at their best, and then they are not very noticeable from a distance.

Planting in Grass.—Various methods have been recommended for planting Crocuses in grass; but after trying many ways, the most satisfactory one has been found to be to remove the turf in September, fork over the ground, rake off an inch or so of the surface soil, distribute the bulbs, replace the soil, and then return the ground. Should the weather be dry at the time, a good watering may follow and a light roller be passed over the ground. By this means little damage is done to the turf, and a better opportunity occurs of placing the bulbs in an irregular and pleasing manner than when other planting methods are adopted. For informal planting under trees, on banks and grassy mounds, the Crocus has no equal in the early days of spring.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

(Continued from page 87.)

AS there are so many good sorts to select from, it is no easy task to choose, say, the best dozen varieties to grow for market, and it is probable that no two growers would select the same sorts. Be that as it may, I have had the advantage during late years of supplementing my own experience in the matter by that of

James Grieve and Ellison's Orange, the latter a variety recently given an award of merit by the Royal Horticultural Society. Both succeed well as standards or bushes. James Grieve is now well known as one of the best-flavoured varieties of its season, but it lacks the attractive colouring of some of its rivals. One of the parents of Apple Ellison's Orange is Cox's Orange Pippin, and the raiser is that old, distinguished and ardent pomologist, the Rev. C. C. Ellison, M.A., of The Manse, Bracebridge, Lincoln. I have known this Apple for twenty years, and can vouch for its excellences of growth, flavour and good cropping qualities. It is ripe earlier than Cox's Orange



CROCUSES IN THE GRASS AT KEW. NOTE THEIR INFORMAL GROUPING.

others; hence I have confidence in recommending the following selection for the consideration of planters. I have already mentioned the old Devonshire Quarrenden as a good early sort to grow, especially as standards.

Beauty of Bath.—This is, perhaps, the handsomest of all early Apples, the colour being bright red on the sunny side, with white spots permeating the whole. The flavour is refreshing and brisk. It bears freely when the tree is once established, but not so freely as some on young trees.

Worcester Pearmain.—Following closely on the above varieties comes this splendid market sort, admitted to be one of the best paying early Apples we have. The tree is a healthy grower, succeeding well everywhere where it is given a chance. It is a constant and heavy bearer, its colour is most attractive—a bright, cheerful red when ripe—and its flavour is pleasant and refreshing. The two named in the next paragraph are early sorts of more recent introduction, both of exceptional merit, which I think growers would do well to give a trial.

Pippin. All early Apples should be sold as soon as gathered, or, what perhaps would be better, sold on the trees, as is frequently done.

Cox's Orange Pippin.—As an autumn and early winter dessert Apple we have nothing approaching Cox's Orange Pippin in point of quality or flavour, and where the soil is good and of fine depth, and the position not too cold, it should be largely planted. But where the soil is not good or too heavy, and the position inclined to be damp and cold, it would be a mistake to plant this variety for sale, as its growth would be weak and the tree liable to suffer from canker. As a substitute for it under such adverse conditions, I would recommend

Allington Pippin.—This is a larger fruit and as handsome when ripe as Cox's Orange Pippin, and in flavour it ranks among the best. The tree is hardy and of robust growth, succeeding very well in the Northern Counties. It is a consistent and heavy cropper. I should like to bracket another variety with this, of equal merit as a midwinter and fairly late Apple, namely,

Christmas Pearmain.—This proved a great success with me at Windsor. It is not quite so large as

Allington Pippin, but is as handsome when ripe, and of the true Pearmain shape. Like the other, it is a heavy and consistent bearer, and both are notable in being precocious bearers, quite young trees of each sort bearing heavy crops. There is a new dessert Apple (in season from November to February) which I think growers for market will do well to make a note of and give a fair trial to, namely,

William Crump.—This is a cross between Cox's Orange Pippin and Worcester Pearmain. It is larger than the latter variety, but possesses its brightness of colour, and Cox's Orange Pippin is represented in the colour of its flesh and its excellent flavour.

Blenheim Orange.—This grand old variety has, perhaps, never been seen in finer condition of growth or of better quality and flavour than it was last year. At fruit exhibitions generally the variety is admissible both as dessert and cooking, and in my opinion deservedly so. It is, perhaps, more suitable for orchard planting as standard trees, and those who are in a position to plant a large orchard of it on suitable land will never regret doing so. The tree lives to be old and attains an immense size. As a late dessert Apple for market purposes it would be hard to find a better all-round sort than

Barnaek Beauty.—This succeeds well as a standard or bush, being of compact growth. It is also hardy.

Culinary Varieties.

Early Victoria.—For a first-early market sort this is hard to beat. It is a handsome pale Codlin of vigorous growth, very prolific, and in season at the end of July.

Potts' Seedling is another valuable early sort, but the tree cankers in some soils. To succeed the above, for September and October there is nothing better than

Grenadier.—This is among the largest of the Codlins, of strong constitution, and one of the heaviest of croppers.

Lord Derby.—As a midwinter variety, taking it all in all, this has few rivals and no superiors as a market fruit at this time. The sort is a strong grower, very hardy, and succeeds well in cold districts. It is a splendid cooker, and when quite ripe is not to be despised for dessert. It is among the largest in size.

Lane's Prince Albert.—This Apple is too well known to need describing. The only thing which can be said against it is that the habit of growth of the tree is of rather a scrambling nature.

Newton Wonder.—This is said to be a cross between Wellington and Blenheim Orange. It has all the good qualities of the former as regards colour and quality of flesh, and in respect to colour of skin, size and noble appearance it holds its own against the latter. The tree is an exceptionally sturdy grower, and a prolific bearer.

Bramley's Seedling.—This sort has been speaking eloquently on its own behalf for a great number

of years by the enormous crops of magnificent fruit it has been yielding and the good prices it has commanded in the market. Like several other good things, it had many detractors for a long time, but it is not too much to say that at the present time it is the most popular market variety of all. This and Newton Wonder are specially suitable for planting in hedges of fields. O. THOMAS, V.M.H.

TREES AND SHRUBS.

FLOWERING SHRUBS OF EARLY SPRING.

It is a strange chance that one of the earliest of our flowering shrubs, namely, the February

time, a plant beloved of cottage folk and very sweet of scent. It does best in a strong loam, when its close, strong growth and wealth of pink bloom in earliest spring, and its crowds of scarlet berries later in the year, give it a double season of beauty and garden value.

The Forsythias soon follow; *viridissima* as a shapely upright bush, *suspensa* as a thing of bold and free growth, whose long flower-laden branches are flung about with a kind of careless grace that has a special charm so early in the year. For those who cannot make up their minds whether they prefer the compact Forsythia *viridissima* or the loosely-shaped *F. suspensa*, there is a hybrid form coming between the two, named *F. intermedia*. It is well to group with the Forsythias the pretty

Spiræa Thunbergi. They flower at the same time and mingle charmingly. The double-flowered *Spiræa prunifolia* follows closely, the long sprays, which in autumn will be almost scarlet of leaf, being thickly set with a close array of the little blooms like small double Daisies.

The deciduous Magnolias are among the most important of the spring-blooming shrubs. Against a wall the large white flowers of *M. conspicua* are grand objects in March, but it is well to keep some protecting material at hand, for March is often cruel, and after hot sun in daytime, 8° or 10° of frost, at night will deface the lovely blooms with patches of brown decay. In April, even in the open shrubbery, *M. stellata*, best of early-blooming bushes, stands smothered with its myriads of starry blossoms of purest white before the leaves are formed, soon to be followed by *M. soulangeana* (see illustration on page 135), a bush of more important growth and large flower, whose outside is tinged with red-purple.

April and May are the months of Apple blossom; and not of Apple blossom alone, but of the greater number of the beautiful flowering shrubs that are closely related to those many fruit trees—indeed, nearly all the fruit trees we have—that are members of the great Rose tribe.

Earliest of all, the Almond shows its tender pink bloom against the hard, deep blue of the skies of

spring, and with it come the many varieties of the Japanese Quince (*Pyrus japonica*) in varied colourings, from purest white through faint pink to a full rosy scarlet; these colourings passing onward to the splendid deep red of Waterer's Knaphill Scarlet, a variety of the highest merit. We have reason to be thankful to some of our best nurserymen for their work in producing these capital varieties, though, no doubt, much may yet be done. The smaller but still more abundantly-flowered *Pyrus Maulei* is also yielding beautiful varieties, while its splendid masses of orange-coloured fruit give it a second season of conspicuous beauty.

The Blackthorn (*Prunus spinosa*) of our hedges is a delightful shrub, and only needs the added



A PROFUSELY-FLOWERED SPRAY OF THE FALSE CHERRY
(*PRUNUS PSEUDO-CERASUS*).

blooming *Climanthus fragrans*, should produce the sweetest-smelling flowers (the large *Magnolia grandiflora* only excepted) of any hardy shrub or tree of all the year. But so it is, and the fragrant little blooms of modest colouring are truly welcome as the heralds of the coming host of spring-flowering shrubs.

Probably the next to bloom will be *Andromeda floribunda*, a neat, dark-leaved peat shrub crowded with white flower-spikes. It has the strange habit of forming the flower-bud in August; by September it looks so forward that one thinks it must be just about to burst into bloom, but so it remains till it actually flowers towards the end of March. *Daphne Mezereum* is in bloom at about the same



A basket of
tuberous Begonias.
1. Fleur de Chrysantheme.
2. Carminia. 3. Gladys.

bounty of the double bloom to be one of the best of garden ornaments. Lovely are the double Cherries and the double-flowered Plums, both white and rose coloured, and they are delightful not only as dainty bushes in the garden, but also as some of the best of shrubs for slight forcing or growing in the cool greenhouse. This same thing may be said for the double Peaches, of which there are now several varieties of great merit. How seldom is *Prunus triloba* to be seen in a garden, and yet it is one of the very best of early-flowering shrubs. It enjoys a place against a wall, where year after year it becomes loaded with its pretty pink bloom. Some of the earliest of the shrubby *Spiræas*, such as *S. Thunbergi* and the double-flowered *S. prunifolia*, are also well worthy of a place against a wall, for our summers are not quite long and hot enough to ripen the tips of the year's shoots when the bush stands in the open, so that the arching spray of bloom is cut short a little way from its end, and instead of finishing with bloom and bud to the very point, there is generally a sudden stop and a bit of dead stick beyond.

One of the best known of the flowering shrubs of this class is the Japanese *Pyrus Malus floribunda*, now in several varieties, and none is better worth a place, either at the extreme edge of a shrub clump or in some quiet detached spot upon grass. Its half-weeping habit is singularly graceful, and a well-grown specimen will cover a large space, the branches bending over mainly to the ground. If the space below it is wanted, as may often happen in a small garden, by gradually removing the lower branches it can be made to take a small tree form, which acquires a high degree of pictorial value as it advances in age, while the head can also be shaped at will by shortening the ends of the branches. Two others of the rosaceous flowering shrubs or small trees should not be overlooked, namely, the Snowy *Mespilus* (*Amelanchier*) and the Bird Cherry (*Prunus Padus*), beautiful either in shrubbery or thin woodland.

Daphne pontica, flowering in May, would be well worth planting if it were for its fragrance only; but besides this delightful quality the quantity of greenish-tinted yellow bloom and bright yellowish green foliage and its compact bushy habit make it one of the brightest and best of small shrubs, and especially suitable for upper portions and frontiers of bold rockery. In May also we have the earlier of the Brooms, the wild yellow, which for its early bloom should not be denied a place on the outskirts of the garden, and its partly crimson variety, *Cytisus andreanus*, also *C. præcox*, of tenderest buttery yellow colour, forerunner of the rather later white Broom of Portugal (*C. albus*) and the Spanish that blooms in late summer. G. JEKYLL.

COLOURED PLATE.

PLATE 1447.

TUBEROUS BEGONIAS AS BASKET PLANTS.

VISITORS to the various exhibitions held during the summer months cannot fail to be struck with the magnificent displays of tuberous Begonias so freely contributed by Messrs. Blackmore and Langdon, Twerton Hill Nursery, Bath. Their success with these charming flowers is proverbial, and the Twerton strain is remarkable, both among the single and double varieties, for the size, shape and colouring of the flowers, as well as for the bold, erect manner in which they are borne. Owing to this prominent characteristic, the blossoms,

desirable kinds: *Alba plena fimbriata*, white; *Alice Manning*, yellow; *Mrs. Bilkey*, salmon orange; and *Marie Bouchet*, light red. This last is an old Continental variety, but it has just the habit of the others.

The gardener who has to furnish a number of hanging baskets during the summer months will look with favour upon these Begonias, as they are not only in themselves remarkably effective, but also supply a decided break-away from the subjects usually employed for the purpose. It will be noted that the flowers are comparatively small, but are borne in great profusion, a feature which stands them in good stead when grown in suspended baskets, as the very large and heavy flowers would under such conditions be more liable to break off, and consequently leave a naked space of considerable extent. The varieties illustrated are all of a double or semi-double character, for



MAGNOLIA SOULANGEANA, ONE OF THE MOST BEAUTIFUL OF SPRING-FLOWERING TREES.

when looked at from above, display their charms to the greatest advantage.

A New Departure.—A class, however, to which Messrs. Blackmore and Langdon have devoted a good deal of attention within recent years is in direct contrast to those just referred to, for the habit of growth is loose and pendulous and the flowers droop. Varieties such as these need to occupy an elevated position in order to see them at their best. Owing to this they are admirably adapted for growing in suspended baskets, and it gives us much pleasure in the accompanying coloured plate to show their varied charms when treated in this way.

Some Good Varieties.—The three varieties represented in the coloured plate are good and distinct, but there are other very beautiful forms. Besides these we noted last season in Messrs. Blackmore and Langdon's nursery the following

the single flowers shown in the plate are the female blossoms, the doubles being the males.

When about to make up baskets of these Begonias, it will be found a considerable advantage to start the tubers in small pots, as when they have commenced to grow, the plants can be arranged better, and, furthermore, the roots are then fully active and will soon take possession of the rooting medium with which the basket is filled. A frequent mistake made with baskets that are intended to be suspended is that the space between the wires is too great, and consequently some of the soil is apt to drop through. Where large flakes of moss can be obtained, and the soil available is of a good fibrous nature, this is not so important a matter; still, it is often a decided drawback. Even when baskets have this failing, it can be remedied by working a little more wire round them.

THE GREENHOUSE.

BEAUTIFUL GREENHOUSE BULBOUS PLANTS.

(NERINES.)

I AM glad to write a few notes on the Nerine, because I think it is a plant that is likely to come to the front and receive a good deal of attention now that its cultivation is beginning to be properly understood. A group of Nerines shown by Mr. Elwes at the Royal Horticultural Hall last autumn (I believe at the end of October) constituted one of the most beautiful exhibits I think I have ever seen at this now famous rendezvous of the plant-lover. As I stood admiring them, a prominent floriculturist said to me, "Daffodils in the spring, Nerines in the autumn; these are

may be obtained ready potted in August or September, and here let it be mentioned that too frequent repotting is a common cause of ill-success in flowering the plants properly. When I was looking at some large mother bulbs full of flower last year, I remember the grower computed that they had been for seven years in the same pots. Small pots are advisable, most of the plants shown by Mr. Elwes last autumn being, I think, in 3-inch pots, and the usual potting compost may be used, but lime in any form is disliked by the plants. During the winter they should have plenty of water to promote free foliage growth, and as soon as flowering ceases, frequent applications of very weak cow-manure-water are beneficial in the way of building up good flowering bulbs for next year. About April or May, or, in fact, when the foliage shows signs of dying off, watering should be discontinued, and I generally dry off my bulbs thoroughly in a warm part of the greenhouse,

many of the new and fine hybrids raised by Mr. Elwes and others are not yet in commerce, increase from offsets being in most cases somewhat slow; but to the amateur who has the time and patience, raising plants from seed is a most enjoyable and fascinating pastime, and I hope to go into the methods of this on another occasion.

Rye, Sussex.

F. HERBERT CHAPMAN.

THE KITCHEN GARDEN.

ROOT CROPS.

BRIEF CULTURAL NOTES.

(Continued from page 112.)

Celeriac.—This vegetable is increasing in popularity, and deservedly so, for it entails but little trouble in its culture. Seed should be sown at this season, any time this month is suitable, and raised in a gentle heat and transplanted before being planted in the open ground 18 inches apart and 2 feet between the rows. Keep the surface soil aerated during the growing season, and as soon as frosts appear, lift the whole of the crop and store in sand or ashes.

Chicory.—One of our most useful winter salads, and easily forced; therefore a quantity of roots should be grown each year according to the demand. Sow the seed in drills 1 foot apart, and thin out when nicely above the soil to 9 inches apart. Keep the crop free from weeds by occasional hoeings.

Artichokes (Jerusalem).—Another vegetable often highly esteemed in midwinter, and one quite easy to produce, as the tubers will grow almost anywhere. The growths are frequently used to hide unsightly buildings, &c. The tubers are best planted in February and buried 6 inches deep and 2 feet apart. When growth commences, earth up the soil as for Potatoes and keep the ground free from weeds. Little other attention will be required. The white variety we find much preferable to the old purple-skinned sort, the flavour being better and the tubers, owing to their better shape, more economical.

Artichokes (Chinese).—Not by any means commonly met with, the above, however, add variety to our winter vegetables, and are easily grown. Plant the tubers in well-prepared ground 3 inches deep and 12 inches apart, allowing 18 inches between the rows.

Salsify.—Sow seed of this vegetable about the beginning of April in well-prepared ground in shallow drills 15 inches apart. Partially thin out when well above the soil, thinning them finally a week or two after to 1 foot apart.

Scorzoneria.—This, like the foregoing, is not met with frequently, but is much appreciated by some, and certainly should be included in gardens where space permits. Sow seed towards the middle of May and treat similarly to the aforementioned.

EDWIN BECKETT.

Aldenham House Gardens, Elstree, Herts.



NERINE UNDULATA IN THE BOTANIC GARDENS AT GLASNEVIN.

my delights among bulbous plants," and it was a remark that may be well understood and appreciated by those who grow both.

I am a great lover and a considerable grower of the Daffodil myself, and, until I found out the Nerine, my autumns, after the excitement of the spring, used to be very dull indeed. Now, and especially now that my three year old seedlings are beginning to come into flower, all this is changed, and the latter months of the year are greatly brightened by my collection of Nerine species and varieties. To this collection are now beginning to be added my own seedlings, which, naturally, constitute a source of interest to their raiser.

Cultural Hints.—The Nerine is not a difficult plant to grow when a few simple requisite details are mastered. The bulbs may be purchased in a dormant state in summer and potted up, but they

transferring the pots outside in August or September to get the benefit of any early autumn showers that are going, and rehousing them at the beginning of October, or, in fact, as soon as buds begin to show.

The Best Varieties.—With regard to varieties, *N. Fothergillii* is usually the first to flower, coming into bloom, as a rule, in September. Its upright and well-displayed umbel of brilliant scarlet flowers makes it an exceedingly effective plant, and with the sun on it it sparkles like gold, this, indeed, being a pretty attribute of all the brightly-coloured Nerines. Later on come *N. flexuosa alba*, *N. undulata* (the subject of the illustration), *N. corusca*, *N. Plantii* and several others, among which should be particularly mentioned the large-flowered pink species, *N. Bowdenii*, which is hardier than some, and may be trusted in the outside border in favoured localities. A great

GARDENING FOR BEGINNERS.

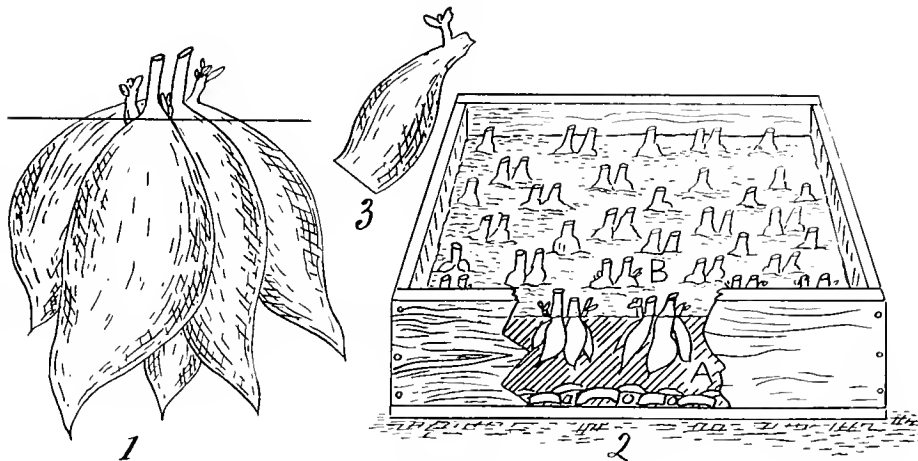
PROPAGATING AND PLANTING DAHLIAS.

DAHLIAS are very popular plants and form a distinct feature in the garden. They are really not difficult to grow if care is taken to raise strong young plants. If weakened by improper treatment while in their first stages of growth, the plants rarely turn out well during the summer months. The storing of the tubers in the winter-time will not tax the resources of any establishment if there is ordinary accommodation, such as dry rooms, cellars and outhouses, from which frost can be excluded. All tubers brought out from damp cellars or storerooms must be very carefully examined, as fungus sometimes grows round the base of the old stem, and it then kills the new bud or buds, which would, in a healthy tuber, grow and form young shoots fit for cuttings. I may here mention that the crowns of all old tubers, when stored, should be covered with pure sand.

How to Procure Healthy Cuttings.—Old tubers should be taken, similar to the clump shown in Fig. 1, and placed carefully in rather deep boxes, as shown in Fig. 2. The horizontal line in Fig. 1 denotes the depth to bury the tubers in the soil in the boxes. Put a few crocks over the holes in the bottom of the boxes, and use as a compost loam, sifted, two parts; leaf-soil, one part; and sand, one part. A, drainage; B, tubers. At this season good positions for the starting of the new growths are in a frame on a mild hot-bed, on a stage in a warm greenhouse, or on a high shelf near the glass in an intermediate temperature. If the first shoots which appear are very spindly, remove them and wait for the second batch. When those forming the second batch are rooted, a third lot will probably be available, and, if the varieties are scarce, further propagation may take place.

Division of Roots.—Fig. 3 shows a detached part of a cluster of tubers. The extreme point is cut off simply to admit of the tuber being well placed in a rather small flower-pot.

How to Insert Cuttings and Tubers.—Fig. 4 shows a young shoot detached from the old tuber, with a heel portion adhering. If the cultivator



PREPARATIONS FOR OBTAINING DAHLIA CUTTINGS AND THE MODE OF INCREASE BY DIVISION OF ROOTS.

wishes to have more cuttings from the same tubers, he must not cut with a heel, but sever the stem 1 inch away from the tuber.

Prepare the cutting by severing it immediately below a joint and remove the two basal leaves, as denoted by the three dark lines drawn on the stem and leaf-stalks in Fig. 4. Insert the cutting with plenty of coarse sand round the stem and base, as shown in Fig. 5. Use a good sandy compost, but not one with manure in it. Fig. 6 shows how the cultivator must pot a divided tuber.

Treatment of Cuttings in Frames.—Guard against excessive moisture, as it would cause the cuttings to decay at the soil-level. Admit air on fine days, shade from bright sunshine, and be careful not to overwater. Plunge the pots to their rims in sifted ashes, soil or Cocoanut fibre.

Hardening and Planting Out.—Directly the cuttings are rooted they must be exposed to more sunshine and air, this to be a gradual process. A slight frost would cripple the plants. Fig. 7 shows how a young plant must be put out in its flowering quarters. The crocks used for drainage

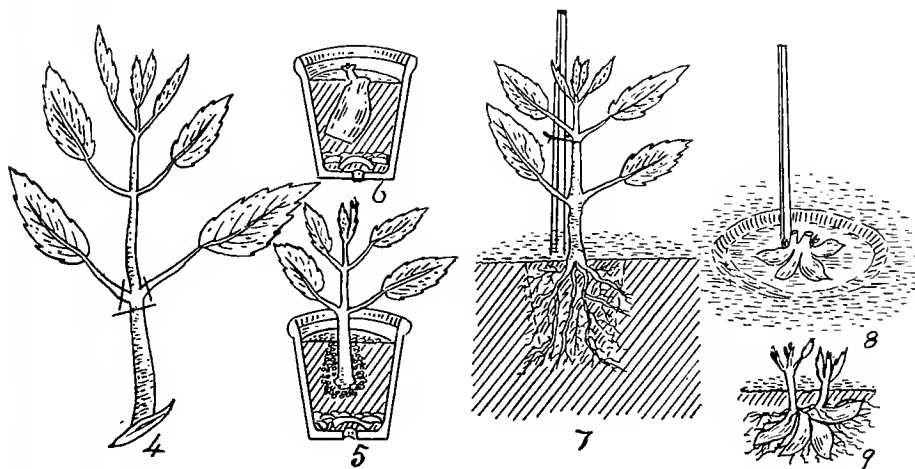
should be removed and the roots carefully spread out. Fig. 8 depicts how an old cluster of tubers may be planted, and Fig. 9 shows the resultant new growths. It is well to reduce the young shoots to two. Old tubers should be planted several inches deep in well-manned, trenched ground in April. Young plants from cuttings must not be put out before the end of May. In the North, June 8 will be early enough. Put in stakes to old tubers when the latter are planted. Surround the young shoots with sifted coal-ashes. G. G.

HOW TO POT AND GROW CANNAS.

THESE plants have become very popular during the past few years, both for bedding-out purposes and for cultivation in pots for the furnishing of greenhouses and conservatories. The flowers are large and richly coloured, and the leaves are exceptionally fine, combining with the flowers to make very handsome plants. The flowering period extends from May to September when grown in pots.

The roots are easily forced into growth, but it is not at all necessary to subject them to a high temperature. The natural growth is much stronger than that which is forced; but from the present time a warm frame or an ordinary greenhouse temperature will suffice.

Some roots may be divided into several parts, each of the latter having an "eye" or bud, so that the stock is easily increased. Use a compost of equal parts of loam and leaf-soil, with a nice quantity of sand to keep the soil porous. Put each root singly in a pot just large enough to contain the root and a small quantity of compost. Very little drainage is needed at the first potting, as the plant must be repotted before it becomes at all pot-bound. Apply water with judgment, increasing the quantity and frequency as the roots multiply. When in their flowering pots and pot-bound a little, commence to feed at first with weak doses of clear soot-water; then give diluted manure-water, and also some approved artificials when the flower-spikes first appear. These plants look well put out in beds in the flower garden from June to September. They should be plunged in their pots. SHAMROCK.



METHOD OF TAKING CUTTINGS AND THE SUBSEQUENT TREATMENT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Border Chrysanthemums.—Where the stools of these were lifted and either potted or covered with soil in a cold frame, excellent sturdy cuttings are now obtainable. These will root freely if placed round the edges of 3-inch pots in a sandy compost and stood in a cold frame. Keep them quite close for a time.

Lobelia cardinalis.—If stored in boxes throughout the winter and kept moderately dry, this plant may now be taken out, divided up, potted into 3-inch pots, and started in a house with slight warmth. Where the stock is low or deteriorating, seed may now be sown.

Bedding Geraniums that were potted singly and placed in a warm house as recommended will soon need transferring to a cooler position and more air given them.

Lawns.—Where these have become worn, due to excessive wet or other causes, a sprinkling of lawn seed applied now will remedy the defect. When the ground is sufficiently dry, rake over with an iron rake and sow the seed. Scatter a little finely-sifted soil over and roll in. Protect from the birds.

Hardy Fruit Garden.

Alpine Strawberries are easily raised from seed, which can be sown now and raised in a cold frame.

Figs.—The pruning of these may now be proceeded with, except in very cold localities. Cut out as much old wood as possible without robbing the tree of too much growth. Figs oftentimes make too much growth at the expense of fruit, and this can be remedied by confining the roots by means of a rough wall. Afford temporary protection again in the event of very severe weather, as the trees are not perfectly hardy.

Pruning and Nailing.—This work must be completed as quickly as possible. Young trees that were planted and just loosely secured will by now have settled at the roots and may be trained into position.

Indoor Plants.

Celosias.—Seed may be sown now of these distinctly beautiful plants in a warm house. To grow them perfectly they must not be subjected to any check, such as becoming root-bound, before being potted on.

Gloxinias.—The tubers, if not already potted, should be so treated without delay. The compost needed is an open, sandy one containing some peat. Water sparingly for a time, but keep the stage well damped between the pots and shade them from bright sun.

Salvia splendens.—Take cuttings now of this for producing plants to flower in the late autumn. Insert the cuttings round a small pot, and root in a warm house.

Eupatoriums.—These, too, make fine plants for late flowering, and require treating much the same way as the above. In the earliest stages a warm house is needed, but throughout the summer the plants may be stood or plunged out of doors.

Solanum Capsicastrum.—When well berried, this has a fine effect during the winter months, and proves an accommodating subject for the greenhouse. Sow the seed now thinly and raise in a gentle heat.

Orchid-Houses.

The Cool House will now need some shade during the spells of sun, but this should only be of a temporary character, so that the plants are not deprived of any light.

Cœlogyne cristata.—These should have sufficient water to keep the pseudo-bulbs plump. Specimens after the flowering is past will be much benefited by having some of the old compost pricked out and new material pricked into its place and surfaced with some live sphagnum.

General Remarks.—With the lengthening days and increase in warmth more moisture will be needed where the occupants are commencing growth. Whenever favourable, admit a little air either through the top ventilators or the bottom

ones under the stage, and with plenty of piping a little may be left on at the bottom all night on the leeward side.

The Shrubberies.

The Early Spring affords an opportunity for giving these a little attention, and their appearance is much improved by the necessary attention to pruning, placing new stakes to those that need them and forking up the ground between the shrubs.

Early-Flowering Subjects.—A selection of shrubs should contain something of interest at all seasons, if possible, and none is appreciated greater than the earliest comers. Interesting just now are *Cornus Mas* and its varieties, the latter being elegantly-marked foliage plants later; *Daphnes*, including *D. Mezereum* and the white variety; *Prunus Davidiana* and the variety *alba*, the earliest of the *Prunus* family. *Nuttallia cerasiformis*, commonly known as the Osoberry, forms a neat bush much resembling a Flowering Currant, but its flowering period is considerably in advance of this. *Erica carnea*, when massed in a bed, forms a pleasing sight.

The Rose Garden.

Pruning.—Owing to the exceptional weather experienced in the South, growth this year is very forward, and the hardier Roses will need pruning without delay. The Hybrid Perpetuals may be dealt with first and pruned fairly hard. Much depends upon the habit of the plant in question as regards treatment. The section named may be cut back within a few buds of the base of last year's growth. Any weak wood is best cut out entirely. The Hybrid Teas may be dealt with next, and, lastly, the Teas; but these must not be pruned too severely. An excellent rule to observe generally is, the weaker the growth the less pruning necessary.

Rosa rubrifolia.—This is a fine Rose where space permits of it being trained in a large bed and allowed to grow over old tree stumps. The foliage is most attractive at all seasons, and so are also the fruits. Thin out the old wood annually to prevent growth becoming too congested.

Rosa Moyesii.—This is a new species of comparatively recent introduction and well worth growing; it makes a good-shaped bush of free growth. The flowers are large and of a beautiful shade of colour, and the fruits are exceptionally fine and handsome.

Rosa nitida.—This is a pretty subject for the shrubberies, and to see it to the best advantage it requires the old growths to be pegged down. The foliage is of a pleasing hue, and the shoots in winter are bright red in colour.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Vegetable Garden.

Soil Cultivation.—As opportunity offers, dig or fork in a shallow manner trenched ground and crush all clods.

Potatoes.—Plant earlies already started on a warm border, as well as in an open quarter of the garden, and follow with midseason and autumn sorts. Early planting is now generally adopted for all sections.

Turnips.—A small sowing of Early Milan may be made on a sheltered border, but it cannot be depended on to succeed. Turnip-tops will now be a valuable asset, but in the North they are not so much valued as they ought to be.

The Fruit Garden.

Standard Fruits.—Break the clods left after digging and smooth the surfaces neatly.

Orchards.—Grass that was roughly surfaced with compost in winter should now be neatly smoothed, stones raked off, and rolled to make the sward level for scythes.

Young Trees.—Those planted last autumn are now at the right stage to prune. Unless provided at the time of planting with numerous fibrous roots, the growths will be feeble, and perhaps it would be preferable not to prune till autumn.

Grafting.—Apples may be grafted now, but there is no reason for haste with these. For

old trees to be regrafted, rind-grafting is as good a method as any. It is a great mistake to grub up healthy old trees, several years being gained by cutting them down and regrafting with selected sorts. The scions should in every case be secured against accidental breakage by some simple method.

The Greenhouse.

Marguerites.—These are all valuable pot plants, and cuttings inserted now may be grown on into fine plants for autumn and winter.

Aster Climax.—This is a splendid greenhouse plant for the end of October and November. Strike cuttings now, and later plant them in the reserve garden 18 inches apart, to be lifted and potted in October.

Chrysanthemums.—Cuttings rooted in boxes are ready to transfer to 4-inch pots. I use for drainage only a little leaf-soil, and pot very firmly, so that grown cool they stand for ten or twelve weeks in these. If plants have been allowed to become drawn, it is better to pinch them well back after ten days or so than to allow them to grow leggy and unsatisfactorily.

Cypripedium insigne.—This is a suitable time to repot this easily-grown Orchid. It succeeds in a light, fibrous, turfy loam, with the addition of a little dry cow-manure rubbed fine. Our plants are repotted once in two years, and are grown in vineries shaded by the Vines. For some time after repotting exercise the utmost caution in applying water.

Climbers.—*Dipladenias*, *Bougainvillea glabra* and *Allamandas* should be pruned hard back, the soil previously being rather dry and kept on the dry side till growth recommences, when, if in pots, they must be repotted, the larger plants having a portion of the old soil and roots removed previous to repotting. *Stephanotis* should be thinned and the leaves and stems thoroughly cleaned.

Trees and Shrubs.

Willows.—Cut these over. I prefer to prune under the surface, the new growths springing freely from underground and presenting a nicer appearance than when ugly stubs are left above ground.

Dogwoods.—These, too, should be cut back now. They do not break so freely as Willows, and so a compromise must be made, only cutting below the surface every three or four years, and in the intervening years pruning above ground.

Prunus Pissardii.—Those grown as cut-backs should also be operated upon, being careful not to cut below the junction with the stock. This plant, after being pruned, should have a fair quantity of rotted cow-manure applied as a dressing, in order at once to cause a vigorous growth and intensify its colour.

The Flower Garden.

Soot.—This is a valuable material for dressing Carnations and many other flowers at this season.

Asters.—Scarce varieties should now be broken up into pieces, retaining for each one or two shoots with a few roots attached.

Larkspurs.—Sow seed of Emperor and Stock-flowered varieties in boxes for transplanting in quite a small state. Sown out of doors in Scotland, they do not flower till too late for effect. Azure Blue Emperor is one of the most beautiful of the dwarf section. Rocket Larkspurs are quite early enough sown in the open in April.

Clematises.—A great many of these must be pruned at once, preserving as much of the old wood of the *Jackmanii* section as possible where they are grown on high walls. *Montana*, which flowers in the course of a few weeks, must not be touched meanwhile. Any of the herbaceous section not yet cut back should also be pruned now. See that climbing sorts are firmly secured.

Mesembryanthemum cordifolium variegatum. A good form of this is valuable for carpeting, and this is the proper time to strike enough plants for that purpose. The cuttings require special treatment. Prepare as many boxes as required, put in a light compost with a surfacing of sand, dibble in short tips 2 inches apart, stand the boxes in a heated structure exposed to the sun, and apply no water till roots are formed. We do not lose three in a thousand by this method.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Azalea Blushing Bride.—The varietal name here given is somewhat suggestive of a distinct and pleasing colour that appealed to all. It is rather difficult to define in words the exact shade as seen in the plants shown, our conception of it being palest rose pink of a refined and beautiful tone. The individual flowers are large, semi-double and widely opened; hence the variety is of the decorative order from all points of view. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Rhododendron Cornubia.—A scarlet-crimson-flowered variety of the *R. arboreum* set, having resulted from the crossing of *R. Shilsonii* and *R. arboreum*. The flowers are shortly tubed, the heads compact and of a showy description. In the outdoor garden at the present time in sheltered places this would be most effective. Exhibited by Messrs. R. Gill and Sons, Falmouth.

Corylopsis multiflora.—A really good and useful addition to this small genera of deciduous hardy shrubs, the plant producing the twig-like, outwardly-inclined branches of the Hazel, from which depend racemose bunches of yellowy green flowers in Ribes-like clusters. Apart from the fact of its hardiness and its early flowering, the greatest attribute of the new-comer is its marked fragrance, and from this point alone it will undoubtedly prove a great gain to British gardens. Exhibited by Miss Willmott, V.M.H., Warley Place, Essex.

Pteris Parkeri.—A green-leaved variety which from the firmness of its texture and good growth promises well from the commercial as well as the decorative standpoint. Exhibited by Messrs. Parker and Co.

Dendrobium Golden Ray superba.—A delightful addition to this showy genus. The sepals and petals are of golden hue, tipped with rosy pink. The lip has a conspicuously dark central eye. Parentage: *D. Othello Colmanæ* × *D. signatum aureum*. Shown by Sir Jeremiah Colman, Bart.

Odontoglossum Jasper.—A flower of exquisite form and of pinkish hue, with darker spots. Parentage: *O. amabile* × *O. crispum*. Shown by J. S. Moss, Esq., Waltham.

The foregoing plants were shown before the Royal Horticultural Society on March 5, when the awards were made.

DAFFODILS AT VINCENT SQUARE.

MARCH 5 AND 6.

SPRING BULBS were present, but they were hardly there in sufficient numbers to warrant this particular show taking the title it does. I should like to see the major portion of the hall filled with them, and all the other flowers, for once in a way, take a decided "back seat." Hyacinths, it is true, were to the fore; but neither Tulips nor Daffodils were as numerous as their utility and importance demand. Should these lines meet the eye of any of the Royal Horticultural Society's powers that be, I would ask them if nothing could be devised to alter this and to make this particular show a characteristic one. I should like to see every Tuesday allocated to some special flower or flowers, e.g., Tulip

Tuesday, Delphinium Tuesday, Flowering Shrub Tuesday. It would be an interesting and attractive departure, and, I think, a sound policy. But enough. I am writing about Daffodils. My first remark is that there were not so many groups as we had last year. I regret this very much, for every year I am realising more and more what a Klondyke of good things for early pot work we have in the Narcissus tribe.

To mention some that are "nuggets" in their decorative value under glass, I would name Victoria, princeps, Golden Spur, obvallaris, Emperor, King Alfred, Weardale Perfection, Eyebright, Blackwell, Seagull, Southern Star, Treasure Trove, Ben Jonson, W. P. Milner (pots), Autocrat, Fairy Queen, Campenelle Jonquils (especially the variety *rugulosus*) and many of those lovely big Leedsis of which Messrs. Cartwright and Goodwin's Long Tom is a pleasing example. I grow a fair number of these latter, and this spring I have made a start in testing them. But there is always someone before you. I lately paid Mr. Walter T. Ware a Daffodil visit, and saw some fine things; but nothing impressed me more than his advocacy of these same "giants" for the same purpose, and as he has given them two or three years' trial, *he knows*. Some varieties are such good doers and quick to increase that the time cannot be far distant when they will be low enough in price to enable some to be so grown. They will not all be, of course, those flawless show beauties like Empire and Patrician; but you can take my word for it they will be all that anyone, bar the show people, need wish for.

Groups.—Only two groups were awarded medals—those of Messrs. Cartwright and Goodwin and Mr. C. Bourne, who each received a silver Flora. Partly this means that 1911 has told its tale and that all but the Trumpets have suffered, and partly that the standard has been put up a hole higher. I always like the way Cartwright and Goodwin "stage." Their head man, Mr. Schneider, manages and arranges the plants very well. I never saw a better lot than when I paid their nursery a visit a few days before the show. Weardale Perfection, Mervyn, Bennett-Poë and Circlet were among the best. Seeing them again at the hall, my good opinion was confirmed, and as they were beautifully set up, they formed a capital group. Eyebright, Northern Light (a very pretty Barri), Matthew Arnold, Fairy, Red and Gold (a good bit of colour, one of Copeland's doubles, of fairly symmetrical form), Mrs. H. J. Veitch and a few charming pots of W. P. Milner were very nice indeed. Mr. Christopher Bourne (silver Flora) had undoubtedly the flower of the show in his attractive Helios, a giant Barri with a similar relation to the old conspicuous that White Queen has to our well-tried friends Mrs. Langtry or Minnie Hume. It has a good stiff, well set-up over-lapping perianth of a rich butter yellow, $4\frac{1}{2}$ inches in diameter, and a good-shaped orange yellow cup, with a nicely-curved edge, measuring 1 inch (length) by $1\frac{1}{2}$ inches, the whole combination forming an exceptionally fine flower. Below was a single flower of Golden King, a capital thing for "showing," with both trumpet and perianth of a good deep yellow. I am sure exhibitors ought to keep their eyes on this. As shown here it was on the small side; but I think I remember seeing it larger last year.

A remarkable vase of the shapely White Queen was one of Mr. Bourne's best things, and he had several others of the same type, such as Pioneer and Sister, all very nice and pleasing. Once more

I claim this exhibit as a confirmation of my views on the giant Leedsii's suitability for pots. Lady de Bathe is an example of the Lady Margaret Boscawen and Brigadier style, with a rather pointed perianth, but with a less violent colour contrast between it and the cup. There were several fine unnamed red-edged cups. I heard that a large one named Simbad was frequently nibbled at by would-be buyers of the stock in the course of the two days.

It is a great thing when we can get a Poet that will never get wingy, but will keep its shape. George Herbert bids fair to do this. It was as good at the end as at the beginning. It has a delicious perianth, not quite flat, but not so undulating as in Almira— $2\frac{1}{2}$ inches in diameter and with a rimmed eye three-quarters of an inch wide. Stephens Phillips is another new one of the paler-eyed type which is now being introduced. A pretty little artist's flower is Dewdrop, a pendulous Leedsii with a pale lemon cup, edged apricot. Other nice things on this stand were Circlet, Castile, Sunrise, Dorothy Kingsmill and Incognita.

Messrs. Barr and Sons had a few standard varieties, such as King Alfred, Viscountess Falmouth (medium-sized Leedsii), Fairy Queen, Constellation and the lovely Santa Maria. They also staged some single-bloom seedlings, among which were one or two pretty good yellow trumpets. Mr. Herbert Chapman's little lot were chiefly notable for two perfectly lovely triandrus hybrids of the purest white. The largest, Madonna had a perianth $3\frac{1}{2}$ inches across, and a longish cup seven-eighths of an inch by 1 inch wide. The other, Alabaster, was equally lovely, but not quite so large and with a wider cup. I hear all these do well in pots; but in this matter I cannot yet speak from personal experience. Ethelbert was small compared with flowers grown outside, but it was a gem—the perianth is not quite flat, but of a slightly wavy surface—milk white, and it has a pretty orange-edged cup. Mr. Thomas Stevenson was looking at the group when I came up, and he pointed it out to me as *the* flower that appealed to him most. I suppose he liked the Countess Spencer-like wave in the perianth. So do I when it is not overdone. I hope to refer next week in my notes to some other flowers, and also to say a word about Cuthbert's fine exhibit of early Tulips. JOSEPH JACOB.

LEGAL POINT.

Landlord and Tenant: Garden (Kendal).—A tenant is entitled to the exclusive possession of the premises till his tenancy terminates. During the continuance of the tenancy the landlord has no right, without the tenant's consent, to enter and cultivate the garden, unless a power to do so is reserved. An elaborately-drawn lease often makes express provision on the subject, and for the exhibition of a board that the premises are to let. The tenant has no power to remove the Raspberry canes, &c. He is entitled to gather his crops and cut the Rhubarb. Although he cannot remove, he may be entitled to some trifling compensation. Presuming that there was no agreement in writing that the premises should be treated as a market-garden, so as to bring the Agricultural Holdings Act into play, yet the tenant could fall back on the Allotments and Cottage Gardens (Compensation for Crops) Act, 1887, and obtain compensation for crops, including fruit, growing upon the holding in the ordinary course of cultivation, and for manure applied in anticipation of a

future crop. His claim would also extend to any fruit trees and fruit bushes planted by him with the previous consent in writing of the landlord.—
BARRISTER.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

ROMNEYA COULTERI (M. C. S.).—Your plant of *Romneya Coulteri*, which has been injured by frost, ought to be cut down to the ground-line at once. It is hardly likely that the stock has been injured. It ought to be cleared of the protective material at once, otherwise the young shoots will be injured as they begin to grow. Clear away the whole of the covering and scatter a few dry leaves over the plant. If shoots are pushing their way above ground, cover the clumps with a hand-light at night when there is danger of frost; but be careful to remove it during the daytime, for it is a bad plan to coddle this plant any more than is absolutely necessary. When the shoots become too large to be protected by a hand-light, erect four stakes around the plant and protect with a double layer of fish-netting each night until all danger of frost is past.

BORDER CHRYSANTHEMUMS AND ASPARAGUS (Gibson).—The best soil for the Chrysanthemums would be a mixture of fibrous loam, three parts, with well-decayed stable manure and leaf-mould in equal proportions for the other part. If you have it at hand, a sprinkling of any good fertiliser, say, a 4-inch potful to each bushel of soil, might be added. Failing this, use double the above quantity of bone-meal, or soot might be substituted. If the soil is light, little or no sand will be required; but if heavy and close, you may use it rather liberally. Use perfectly clean pots 4 inches across and pot very firmly. Place the plants at once in a cold frame, but afford air freely when they have become rooted. Remove the point of the plant on the latter starting into growth after, and plant out in well-prepared ground any time during the latter half of April. You do not say the age of the Asparagus when planted, and upon this very much depends. For example, it is not advisable to cut before the plants are in their third season, and then only lightly, the cutting to cease with the month of June. Much, too, depends on the rate of progress, and as this in turn is the direct product of cultivation, the man on the spot should be the better judge. If, however, you get a fair show of stems of the size of the index finger, or even the small finger, a moderate thinning of these for culinary purposes up to the middle of June would do no harm.

TREES AND SHRUBS.

LILAC BUSHES NOT FLOWERING (H. E. J.).—We advise you to stop the application of manure to your Lilac bushes for the present. You might try whether root-pruning will induce the bushes to flower. There is a possibility, however, that a lot of sucker shoots have grown from the base; if that is so, cut any such shoots out and leave the bushes nice and open. It would also be a good plan to thin out some of the thin, inside shoots, in order that all the vigour may go to the perfecting of the buds on the principal branches.

TREES TO PLANT NEAR A STREAM (C. B.).—It is not likely that fruit trees would be a success in the wet position you mention, although a great deal depends on whether the ground is wet enough to become sour or whether it simply keeps moist. In the latter case the greatest danger would arise from late spring frosts, for in such a position a little frost would be more harmful than a greater amount in a place where ground and atmosphere were higher and drier. Among deciduous, large-growing trees you have a choice of Willow, Alder, Poplar and Ash. We advise you to plant *Salix alba carulea*, from which the best wood for cricket bats is obtained. The tree grows rapidly, and in from fifteen to twenty years would be likely to bring in a good return from the ground. Providing you simply wish for a decorative effect, you might plant the weeping *Salix babylonica* and the upright-growing deciduous Cypress (*Taxodium distichum*). Other trees suitable for the position are

Alnus glutinosa, *A. incana*, *Populus nigra*, *P. balsamifera*, *P. canadensis*, *Salix fragilis*, *Fraxinus excelsior* and *F. americana*. If you prefer to try fruit trees, it would be as well to experiment with a few for a start, and plant them on mounds a little above the ordinary level of the ground.

CLEMATIS SEEDS (K. M.).—The Clematis seeds sent for examination appear to be fertile, and we see no reason why they should not germinate. Try sowing them in a well-drained pot in a compost of two parts loam, one part leaf-mould and one part sand. Cover the seeds very lightly with soil, just giving what will cover them nicely. Stand in a warm and moist greenhouse, shade from bright sunlight and be careful with the watering. Never allow the soil to become really wet or sodden, and, on the other hand, do not allow it to become dry. The present is a very good time to sow the seeds. Clematis seeds sometimes vegetate quickly, and at others lie several months in the soil before a movement is made.

PRUNING SHRUBS (Aecia).—An autumn-flowering *Ceanothus* may be pruned at once. Cut last year's branches back to within a couple of eyes or so of the base, but do not prune into old and hard wood unless young branches occur about the lower part of the plant; then you may cut the old branches down to them. As your plant appears to be rather old and neglected, we advise you to destroy it and purchase a young one, for such plants are very cheap. Your *Jasminum* can be cut fairly hard back at once. Thin the branches out well to begin with; then shorten all side branches back to within two or three buds of the base. If it is a winter-flowering kind, reserve any future pruning until the flowers have faded. Early April is a good time to prune Ivy, for at that period it may be cut very hard, and new growth is soon formed to hide the cuts and take off the bareness of the wall. It ought to be taken off all water-pipes and be cut down at least 1 foot below the eaves of the house. Old Laburnums do not stand pruning very well, for decay from the wounds often spreads into the trunk, and it is rarely that large wounds heal over. When branches have to be cut away, be careful to coat all wounds with tar at once. June and July are good months for the work. Your old Lilacs should have all sucker growths cut away from the base, and a good proportion of small branches from the inner parts of the bushes may also be removed. This may be done at once. In June go over the bushes again and remove suckers and inside branches which may be forming. Should you wish to lower any of the bushes, you may do so as soon as the flowers are over. It is a good plan to remove old flower-heads, and thus prevent the formation of seeds. Your Box bushes may be pruned in April. They will stand fairly hard pruning, but it is not advisable to prune them into very old wood. Clematis *Durandii* and *C. Jackmanii superba* are suitable varieties for your purpose, the former in mauve, the latter in purple. Ivy-leaved Geranium *Mme. Crousse* or *Fuchsia Charming* would be suitable for your basket. An ordinary wire basket will do quite well.

THE GREENHOUSE.

MAIDENHAIR FERN (M. C. S.).—If your Maidenhair Fern fronds are brown, or turning brown, it will not harm the plant to remove them all just before new fronds appear. Be careful to cut them off as close to the crown as possible. Some market-growers make a practice of removing all the fronds in spring. A higher temperature and a moister atmosphere than have been given in the past will be necessary until new fronds appear.

CYCLAMEN FAILING (J. H.).—Your case is a decided puzzle, and we do not feel any great confidence in suggesting a probable cause for your Cyclamen going off in the way they have done. It may be that some of the stimulants have been splashed into the crown of the plant; but what appears to us the most likely solution of the matter is that the little mite known usually as the *Begonia* mite, from it having been first observed on these plants, is at the root of the mischief. The damage, in all probability, was caused during the early stages of flower development, when the stems were very succulent. As the result of the abnormal weather experienced last summer, we have had many instances brought under our notice this season of damage done to Cyclamen by this pest; but in nearly every case the partially-developed petals had a pronounced brownish tinge. The worst of this mite is that its attacks are of so insidious a nature that a good deal of permanent mischief is done before its presence is even suspected. It may be destroyed by dipping in a solution of nicotine, or by vaporising with the XI. All Vaporiser; but two or three applications are necessary in order to effect a perfect cure.

BEGONIAS AND CALCEOLARIAS FROM SEED (A. R. D.).—You will find an article on how to raise Begonias and Gloxinias from seed in THE GARDEN for January 6 last, and perhaps from this you may pick up some useful hints. With regard to the cause of your non-success, we might suggest various things, and then perhaps be wide of the mark. The surface soil on which the seed is sown may have been made too firm, so that the tiny rootlets cannot penetrate therein; next, the soil may have been kept too wet or too dry, or the atmosphere of the house too moist, so that the young plants damp off. Furthermore, the germinating seeds are exceedingly tender, and a few minutes' bright sunshine on them would prove fatal. In the case of these tiny, delicate subjects they should be pricked off singly in some light, fine soil as soon as the first leaf makes its appearance. You may, perhaps, have neglected to do this until the tender seedlings have gone too far. The Begonias should be sown early in the year, in order to give them a long growing period, whereas the Calceolarias are, as a rule, sown in May, June or July, the middle month being generally

preferred. At that time a greenhouse temperature is sufficient for them, while they need a moist atmosphere and must be shaded from the sun. Like the Begonias, these must be pricked off as soon as they are large enough to handle, and a sharp look-out kept for aphids or green fly.

CUCUMBERS AND TOMATOES IN THE SAME HOUSE (Miss M. K.).—It would be possible to grow both Cucumbers and Tomatoes in the same house during the summer months, but not advisable. Cucumbers require a close, moist atmosphere, and Tomatoes a dry, buoyant atmosphere and plenty of air. You might, if you wish it, try a few Cucumber plants in a good light, rich soil in boxes measuring 2 feet long, 1 foot wide and 1 foot deep, placing the boxes on the stage. The boxes should be half filled with compost first, and as the roots show on the surface, top-dress with thin layers of rich loam, rotted manure and leaf-soil. Sow the seeds the first week in April. The Tomato seeds may be sown at once, as it will be possible to keep the resultant plants safe from frost by covering them with newspapers at night for a time. Yes; fruit the plants in pots placed on the stage, and follow the instructions given in THE GARDEN.

CHRYSANTHEMUMS FOR LARGE BLOOMS (F. R.).—The varieties *Sunstone*, *Soleil d'Octobre* and *Mme. Julian Valet* named in your list do not bear very large blooms, not large enough to show on boards or in vases. *Soleil d'Octobre* would flower too soon for the November exhibitions. *Sunstone* is a variety grown more for decorative purposes, and is in season at the end of November. Mrs. Greenfield.—Allow this variety to make a late natural break and "take" a late crown bud. Miss Mildred Ware.—Pinch the shoots early in April, and "take" second-crown bud. General Hutton.—Natural break and natural first-crown bud. Splendour.—Natural break, but if this does not show by May 25, stop the shoot and cause a break. Mrs. F. Judson.—Natural break and first-crown bud. W. R. Church.—Stop May 10 if a natural break does not occur, and take first-crown bud about August 12. Norman Davis.—Stop April 15, second-crown bud.

MISCELLANEOUS.

PRIMULA LEAVES FOR EXAMINATION (J. P.).—It is always more satisfactory to us, for we can better form an opinion of the cause, when roots as well as leaves are sent in cases where the main trouble appears to be spotting of the foliage, for leaf-spotting frequently arises from some trouble at the root. We can find no fungus or trace of insects on the foliage in the present case, and it is probable that the spotting of the foliage is the result of the plants having been allowed to become dry at some time during their growth.

DECORATING A CHURCH FOR A MARRIAGE (A Decorator).—No hard-and-fast line can be laid down for decorating a church for a marriage, as so much depends on the taste and fancy of the individuals, and still more upon the amount of money that it is intended to spend on decoration. Some use only white flowers, while by others coloured ones are employed. Various ideas influence the choice of the flowers; for instance, if the bride has a floral name, such as Rose or Lily, the flowers employed are sometimes, as far as possible, limited to these two classes. Again, should it be a military wedding, the colours of the regiment are often reproduced in flowers. In a general way Palms are largely employed for wedding decorations, and for flowers, Arris Lilies, Trumpet Lilies and *Lilium speciosum* are very popular. As a rule, the decoration is limited to the altar steps and the chancel, the Communion table being ornamented with cut flowers. For white flowers at the season you name, *Spiraea* are very useful. One point to be observed is that it is very necessary that the Palms (of which *Kentias* and *Cocco flexuosa* are the best) are tall and graceful in character, for a lofty church has a particularly dwarfing effect on plants arranged therein.

NAMES OF FRUIT.—J. Green.—1, Ross Nonpareil; 2, Cox's Orange Pippin, well kept.

SOCIETIES.

FLOWER SHOW AT EALING.

A FLOWER show will again be a feature of the Co-partnership Festival, which this year will be held at the Breamtham Garden, Sunbury at Ealing. The schedule, which extends to more than one hundred classes, is now ready, and can be obtained on application to the hon. secretaries at 6, Bloomsbury Square, London, W.C. Not only is the co-partnership movement offering prizes and trophies, but special awards by leading firms and certificates to prize-winners by the Agricultural Organisation Society add to the attractiveness of the schedule, in which particulars of more than three hundred prizes are published.

The Royal Gardeners' Orphan Fund.—The committee of this Fund desires to acknowledge its indebtedness to a gentleman, who was sunable to be present at the recent annual meeting, for a contribution which will ensure the receipt of 5s. per week by one of the unsuccessful candidates on that occasion, an act of thoughtful generosity for which the child's mother is deeply grateful.

THE GARDEN.

No. 2105.—VOL. LXXVI.

MARCH 23, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Rhododendron campylocarpum in Argyllshire.—Many of the Himalayan *Rhododendrons* thrive admirably in the more favoured spots in the West of Scotland near the sea, and one of the places where they flourish best is at Poltalloch, Lochgilphead, Argyllshire, where Colonel Malcolm, C.B., has a very fine collection of flowering and other trees and shrubs and hardy flowers. Here *R. campylocarpum* has survived and flourished for many years without suffering from the weather it has experienced and has given a good display of its pretty, sulphur yellow, bell-shaped flowers.

Flower Show Schedules.—The Journal of the Royal Horticultural Society for March contains an excellent article by the Rev. W. Wilks on some difficulties in flower show schedules. As all judges know, there is a great deal of laxity in many of the schedules drawn up for provincial shows, and this oftentimes causes a great deal of ill-feeling between exhibitors. Those who are responsible for the compilation of schedules should read the article referred to before commencing. Mr. F. J. Chittenden, F.L.S., Director of the Society's Laboratory at Wisley, also contributes an interesting article on some plant diseases new to or little known in Britain. These include Lettuce leaf-rot, leaf-spot of Campanula and streak disease of Sweet Peas (well known, but little understood). The Journal is sent free to Fellows of the society, and can be obtained by non-Fellows, price 5s., from the Secretary of the society, Vincent Square, Westminster.

A Warning.—We have received complaints from several readers living in the suburbs of London and cities in the Midlands that hawkers are selling what are supposed to be the best varieties of Carnations and Roses at low prices. The trick is a very old one. The supposed Carnations, which have healthy, vigorous foliage, are usually nothing but worthless seedlings, and the Roses are generally Manetti or some other stock used by nurserymen for budding good Roses upon. The roots are neatly tied up with moss, and the names on the labels are, we presume, taken from a nurseryman's catalogue and applied haphazard. To make matters worse, some of these itinerant vendors carry with them a catalogue of a well-known Rose or Carnation firm, and state that they are selling the plants on behalf of that firm. Our readers will be well advised to have nothing to do with these rogues, and we feel sure that any firm whose reputation is being jeopardised in this way would welcome information that would enable them to stop the practice.

A Good Greenhouse Rhododendron.—In those gardens where large, cool greenhouses have to be furnished, an ideal home may be found for the

handsome Himalayan *Rhododendron griffithianum*, for it wants no more than protection from frost. In the Southern and South-Western Counties it thrives excellently out of doors, and at the present time its large white flowers, which are from 4 inches to 5 inches across, are opening. The species is not, however, of much account, so far as the production of flowers goes, until it has attained a considerable size, especially when raised from seed, for although young plants produce a few trusses of flowers, it is only those which are moderately well matured which bear a full crop of bloom. In some gardens it is known as *R. Aucklandii*.

The Alpine House at Kew.—Visitors at Kew during the next few weeks would do well to make a point of seeing the Alpine House, for in it a profitable half-hour might be spent at any time. On the occasion of a recent visit the following plants, among others, were noted in flower: *Puschkinia scilloides*, *Muscari armeniacum*, *Tulipa kaufmanniana*, *T. pulchella*, *T. fosteriana*, *Hyacinthus azureus*, *Brodiaea uniflora*, *Cyclamen pseudoibericum*, *C. Coum*, *Corydalis decipiens*, *C. bulbosa* and variety *Halleri*, *Draba cuspidata*, *D. azoides* and other species, *Gentiana verna*, *Heloniopsis japonica*, *Anemone pulsatilla*, *A. hortensis*, *Saxifraga* in variety, *Romulea cruciata*, *Shortia grandiflora*, *Trillium nivale*, *Rhododendron intricatum*, *Primula frondosa*, *P. pubescens alba*, *Scilla italica præcox* and *Narcissus cyclamineus*. The collecting together of highly ornamental plants such as these in a quite cold house is well worth while, for the full value of the flowers is obtained while the flowers of outdoor plants are subject to injury from inclement weather.

A Beautiful Flowering Shrub.—Previous to the commencement of the present century, about four species of *Corylopsis* were known in British gardens; but the introduction of new shrubs from the Far East has been pushed so vigorously during the last twelve years that it has been possible to add nine other species to this genus alone. Some of these species were previously known by dried specimens, but were not in cultivation. *C. pauciflora* is one of the older kinds, although not a common shrub. A native of Japan, it forms an elegant bush a few feet high, with slender wiry branches, which bear bright green, heart-shaped leaves up to 3½ inches in length. The leaves are very beautiful in springtime, for from the time the buds begin to burst and the leaves to show until they are fully developed they are prettily marked with rich brown and pale green. The flowers appear in short, axillary, pendent racemes before the leaves. They are upwards of half an inch in diameter, primrose yellow in colour, and scented like Cowslips. Unfortunately, it is subject to injury from spring frosts.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Daphnes.—I am sorry that in my article on Daphnes in your issue of March 2 the beautiful *D. Cneorum* and its varieties *D. C. majus* and *D. C. fol. var.* were not mentioned. They are three of the best plants for rockeries and borders. We found last year on the Jura a pure white variety of it, which, I think, will be the best loved of all in gardens. I must add that in the article the group of *Daphne odora*, *marginata* and *japonica* is, unfortunately, comprised under that of *D. Mezereum*, which was not my intention.—H. CORREVON.

Gaillardias.—"D.," on page 118, issue March 9, touches on a few points connected with the cultivation of these plants, and his remarks are helpful to those who are inexperienced in the growing of Gaillardias. Undoubtedly, they are difficult plants to associate with other subjects, but when grown in masses they are very effective indeed. I would like, however, to draw attention to the fact that the plants do remarkably well on a north border, even in a position where the sun's rays rarely penetrate in the brightest weather. The flowers, I found, were more richly coloured than those on plants in the open.—AVON.

Pruning Rose La France.—I presume all Rose-growers prune their trees so as to obtain quantity combined with quality of flowers. Having tried hard pruning and light pruning in regard to the variety above-named, I find that light pruning and judicious thinning out of all weakly shoots answer best. The kind of pruning needed is that between the pruning of a Hybrid Perpetual and a Hybrid Tea. If the surface soil is then removed and a good top-dressing of rich lumpy loam and well-rotted manure put on, the crop of blooms from a healthy bush will be quite satisfactory.—SHAMROCK.

Hardy Azaleas from Seed.—I wonder why more people do not grow these from seed? I sow mine when ripe about the end of January, keep the plants in a cool greenhouse until about two inches high, and then keep them in a frame until the following spring, when they are planted out. I have planted out in the autumn of the year they were sown, but found many of the plants were lifted by the frost. Many show a flower or two the third year from sowing, and, after that, practically all flower freely. The colours are very good, and the plants want no further looking after. As long as there is no lime in the soil they seem to thrive here in North Lancashire, and could be easily raised by the thousand.—W. F. E.

Hardy Azaleas.—Your correspondent "B." refers to the above plants on page 118 of March 9 issue. Some years ago, when engaged in a garden in Mid-Cheshire, I was impressed by the loveliness of a hardy yellow Azalea which did well in that part, reaching quite 6 feet in height. Although a great deal of tree and shrub planting took place there annually, no other preparation was made beyond trenching the ground. In a neighbouring garden in this district (East Middlesex) the above species likewise does well. Did "B." notice the illustration and notes on hardy hybrid Azaleas in January 27 issue of THE GARDEN? The plants are growing in Highgate, and a great many of them are approaching 5 feet in diameter. The mode of culture is given.—C. T.

Saxifraga Aizoon la graveana.—In Mr. Wyndham Fitzherbert's interesting article on the dwarf forms of *Saxifraga Aizoon* in the issue of March 2, page 105, he refers to one with the "impossible name of *La Ga Dauphane*." No two persons seem to agree on the spelling of the name of this unfortunate plant, yet it is quite simple, and should read *Saxifraga Aizoon la graveana*. If the "Kew Hand List of Herbaceous Plants" were adopted as the standard, there would be a possibility of extricating the nomenclature of hardy plants from the almost hopeless confusion which now prevails.—C. DAVIES, *Steuernage*.

A Sweet-Scented Plant.—I have just been replanting a large specimen of *Monarda didyma*. It had been in its position three years, and the centre was getting weak and decaying. The clean young growths were all round the outside of the clump, after the manner peculiar to several other herbaceous subjects. The variety we grow is Cambridge Scarlet, which much surpasses the original in intensity of colouring. Any good garden soil suits it; but should the position incline to dryness, compensation must be made by reasonable waterings when making growth. It is a really first-class border plant, and useful for cutting. The most striking feature about it is its sweet scent; this is apparent from the tiniest leaf and stem to the full flower. Sometimes when working near a specimen one accidentally touches a leaf or growth, and immediately a sweet perfume is noticeable. The scarlet flowers are borne in whorls, and the stems or growths are square instead of round like ordinary herbaceous stems.—C. TURNER, *Ken View Gardens, Highgate*.

Gold-Laced Polyanthuses.—Mr. Bentley's appeal on behalf of these ancient florists' flowers, once so favoured, now so seldom seen, recalls such growers of them as Samuel Barlow, Ben Simonite, the Rev. F. D. Horner, R. Dean, James Douglas and some others who presented them at exhibitions of the National Auricula Society in London. If from Lancashire, they were good; if from the South, poor. Climate seems to have had so much to do with these rather delicate yet hardy plants. Down South greater warmth seemed to demoralise the flowers. When at Bedford, I sought to grow for my brother Exile, Lancer, George IV. and such other varieties as were obtainable. We found that summer heat weakened growth, yet the plants were kept as cool and shaded as possible, and in spring the flowers were always deficient in refinement. I wonder whether anyone saved stock of Barlow's beautiful red-ground Sunrise, which was indeed a lovely variety, but which, I fear, passed away with its good Manchester raiser.—A. DEAN.

How to Arrange Daffodils.—This is one of the burning questions of the moment, and as experts seem to differ widely in their opinions nowadays, it would be well if some definite pronouncement could be elicited from those who are in the habit of acting as judges, so that the poor exhibitor should know how to proceed. Now, for instance, I was told at the Royal Horticultural Society's show on March 5 that Mr. Christopher Bourne had lost some points through inferior arrangement. This was a stagger to me, as I considered his arrangement was about as good as it could be. I wonder what the judges really want? Surely not that stiff and staring style of putting up which gives every flower what I once heard Mr. Felton describe as a sort of "I've-got-you-in-my-eye look." Then there is (or was) the other extreme at one time practised by my old friend, the Rev. G. P. Hayden, who used

to arrange some of his flowers with their "backs to the audience." I remember a great raiser once called my attention to a certain Daffodil because it had such a "beautiful back," but I confess that I quite failed to rise to the situation, and neither then nor since have I been able to satisfy what aesthetic sense may be in me by admiring the back of a flower. Let me quote for a moment from the book written by Mr. Christopher Bourne's father: "They (the flowers) should be tastefully arranged with their faces turned, some wholly, some partly, to the front, and so that all may catch the eye." These words were written by the leading judge of his day (and a day not so very long past). It would be both interesting and instructive to hear from his successors as to whether they go on his lines in judging, and, if not, what new canons they have to lay down for us.—F. HERBERT CHAPMAN, *Rye*.

Bitter-Pit in Apples.—I note in your issue for March 9, page 119, that your Colonial correspondent Mr. D. McAlpine asks for any information concerning bitter-pit in Apples, and refers to the fruit figured in THE GARDEN, December 2, 1911. He desires to know the rainfall during the maturing of the Apples in the orchard where the fruit of Tower of Glamis was grown. As the Apple figured was grown in these gardens, I have pleasure in giving him the rainfall during the maturing three months, viz., August, September and October. We had a slight rainfall on the first five days of August, amounting to only 0.65; then there was no rain till the 21st. From then till the end of the month we had 0.72. In September rain fell on ten days, with a total of 1.49. In October rain fell on seventeen days, the heaviest on the 21st, when 0.75 was registered. The total for the month was 3.48. Our soil is a thin loam overlying the usual brashy limestone of the Cotswolds, and we soon suffer from lack of moisture. I think the trouble was due to the excessively hot summer, followed by the rains in the latter end of September and October, as the earlier varieties, such as Mr. Gladstone, Beauty of Bath, Lady Sudeley, &c., were not affected. I did not observe any spots until the October rains. We grow over sixty varieties of Apples. The softer-fleshed varieties were affected most.—D. ELKINS, *The Gardens, Treasbury, Cirencester, Gloucestershire*.

English-Grown Hyacinths.—At the show at Vincent Square on March 5 and 6, Messrs. Bath of Wisbech exhibited, among other things, a little group of Hyacinths that had been brought up from their babyhood in their own nurseries. That is to say, the parent bulbs had been prepared there for producing the tiny bulbils which are the infants of the future larger bulbs as we know them, and these little mites had been grown on until they were strong enough to produce ordinary flowers. Readers may know the tale of how first the pupils, and then Dr. Blackie himself, "scored" over one another by rubbing out a letter from the sixth word of the notice "Dr. Blackie will meet his classes on Monday, &c." Well, the original label on the Hyacinth said, "Dutch miniature Hyacinths, &c." It was only when I was talking about them to Mr. Leak, the manager of the firm, that I learned the truth, and on my suggestion "Dutch" was deleted. Later on a closer inspection revealed the fact that they were not all "miniatures," but that some were fine "second-sized" bulbs at least, and I longed to do what Dr. Blackie did—rub out another word.—J. JACOB.

A Giant Mushroom.—I am sending you a Mushroom that I think is a little uncommon. I am sorry I neglected to send it when it was in a better condition. It measures 1 foot across and 45 inches or more round, and the stalk is 9 inches round. It weighs 1 lb. 5 oz. I have some more very fine ones, which I think are the largest I have ever grown. The spawn is Carter's.—A. G. GENTLE, *Little Gaddesden, Berkhamsted.*

A New Flowering Currant (*Ribes laurifolium*).—This new interesting shrub, which was shown before the floral committee of the Royal Horticultural Society on February 22 and gained an award of merit, is one of the subjects raised from seed collected by Mr. E. H. Wilson in China. Though the flowers are not showy in colour, the plant is, nevertheless, peculiarly attractive. The growth, for instance, suggests another family altogether, and the fully-matured leaves during the summer are of a deep bronze colour. The natural habit of the plant is dwarf and spreading, and in its native habitat it is found among rocks. I believe it will prove a very useful plant for the rock garden in the near future. It is quite hardy, and a young plant opened and produced its flowers during the week of cold weather, when we registered 20° on two consecutive nights. The flowers are produced in drooping racemes, which, since the photograph was taken, have considerably lengthened. The individual flowers are of a pale yellowish green, much resembling Cowslips, and last in a fresh state for a considerable time. Its early flowering will undoubtedly add to its popularity. Whether the black, oval fruits will mature in this country remains to be seen.—E. BECKETT, *Elstree, Herts.*

Why do Snowdrops Fail in Some Soils?—I have read with interest the remarks of Mr. Arnott, page 82, February 17, and Mr. W. A. Watts, page 102, March 2, on this subject. Although my experience has been of a negative kind, I offer it for what it is worth, more especially because it rather clashes with Mr. Watts' dictum as to stiff, badly-drained soil. The natural soil here is mostly yellow clay, the exception being a portion close to the shore of the Firth of Forth, which is pure sand, having at one time been inundated by the sea. The gardens proper all contain a considerable amount of "forced" soil, lying on the clay, and, like the bulk of the property, retaining stagnant moisture to a considerable extent during winter. We have large quantities of the common Snowdrop, single and double, growing under all the conditions named, and all thriving equally well. During the thirty years I have had charge here I am not conscious of a single bulb having perished; on the contrary, they have increased enormously. We have also a quantity of *Galanthus Elwesii* growing in the gardens, and it succeeds equally well. I should add that all the naturalised Snowdrops here are more or less planted under trees, but mostly where the leaves are raked up annually.—CALEDONIA, *Mid-Lothian.*

The New Race of White Daffodils.—One noticed three new interesting Daffodils on the stand of Mr. Herbert Chapman at the Forced Bulb Show at the Royal Horticultural Hall on the 5th and 6th inst. They were a series of triandrus-Leedsii hybrids, all by different raisers, named respectively White Witch, Alabaster and Madonna, and all were characterised by their purity of colouring, refined appearance and delicate waxy texture. The first-named is a comparatively small flower, the cup on first opening having a pale citron tinge,

which afterwards fades to quite pure white. Alabaster is larger and more solid, and the entire flower opens pure dead white, a most charming thing. Madonna, the gem of the trio, was generally pronounced the finest pure white Daffodil that has yet been shown, a very large flower with slightly reflexing petals, which rather enhance its beauty, and the entire flower looked as though it had been modelled out of a block of white wax. These new triandrus-Leedsii hybrids are now proving to be of strong constitution and good increase, and they all possess the good length of stem required by the market-man. Is it, then, too much to hope that these hardy flowers will before long compete with, and perhaps displace, such things as the Eucharis Lily for wreaths, bridal



YOUNG SHOOT OF THE NEW FLOWERING CURRANT, *RIBES LAURIFOLIUM*.

bouquets and work of this sort? The stocks as yet, of course, are small; but a watchful eye should be kept on the best of them, and most probably to the careful and far-seeing grower they will prove to be no bad investment.—A.

FORTHCOMING EVENTS.

March 26.—Bournemouth Horticultural Society's Spring Flower Show (two days).

March 27.—Royal Horticultural Society's General Examination; Liverpool Horticultural Association's Show (two days), Royal Botanic Society of London Meeting.

March 28.—Torquay District Gardeners' Association Spring Flower Show.

March 30.—Paisley Florist Society's Spring Show; Société Française d'Horticulture de Londres Annual Dinner.

THE ROSE GARDEN.

THE ROSE AS A HEDGE PLANT.

WE are annually receiving so many very vigorous-growing novelties that it will soon become—in fact, has become—a problem what to do with them. If planted in the beds or borders, they soon encroach upon the other occupants and are much out of place, and one cannot grow them all as standards or use them as climbers or pillar Roses; but I think many hedges of Roses could be planted about the garden far more than we see at present. In the first place, every Rose garden should be enclosed with hedges of Roses, even if it be thought necessary to have evergreen shrubs behind them, and certainly in a very large rosery several hedges should be employed, not, of course, extra tall to obscure the view, but to add diversity and also to be of utility in sheltering beds of tender Teas. But I have not so much in mind tall hedges of Roses, which we can have by planting the various ramblers. They are majestic and also useful as providing grand shelter from cutting winds even in winter.

Strong-growing Roses.—What I desire to emphasise is the possibility of utilising such vigorous-growing Roses as J. B. Clark, Hugh Dickson, Mrs. Stewart Clark, Dr. O'Donel Browne and others as hedges. Why should all that fine growth which they produce annually be cut away or reduced at pruning-time, when by preserving much of it we could double and treble the crop of bloom? Now, a hedge of such large-flowered Roses is a real joy, and with care in thinning out old wood, also in nourishing the plants with liquid and other manure, we may have grand hedges of Roses, yielding an abundant harvest of bloom.

Mixed Hedges.—Many of the splendid climbing Tea and Hybrid Tea Roses, such as Bouquet d'Or, Lady Waterlow, Gustave Regis, William Allen Richardson, Reine Marie Henriette, Johanna Sebus, Ards Rover, Ards Pillar, Rosette de la Legion d'Honneur and many more, could be blended together to form a delightful mixed hedge of Roses, and, being perpetual-flowering, would be a source of delight from June to October.

There is one Rose I should like to direct attention to for this purpose, and that is Gottfried Keller. Surely it is one of the loveliest of semi-double Roses we possess, and how charming it would be as a 3-feet to 4-feet hedge with Irish Elegance, the two giving us quantities of elegant bronzy yellow flowers throughout the season. I think we do not sufficiently appreciate Gottfried Keller. Its half Briar-like nature makes it a very sturdy grower, and yet there is in its bloom all the delicacy of a Tea Rose. It was obtained by a series of crosses, which proves the value of so doing, and it is to be hoped raisers will attempt more in this way. I fully expect, through the Pernetiana group, that we shall soon have quite a number of good Roses suitable for hedges. There is one of this group, Beauté de Lyon, which must prove to be a good variety for this purpose; indeed, I think it will be a sort that will resent the knife, and it must be grown either as a free bush or in pillar or hedge form. What a glorious colour it is, coral red, slightly shaded with yellow. A hedge of this alone would be a splendid feature in any garden. The China Teas would make beautiful low hedges—I refer to such sorts as Comtesse du Cayla, Queen Mab, Eugène Resal, Laurette

Messimy, General Schablikine, Corallina, Safona, &c. They would provide us with an array of blooms from June to October, and if relieved of old wood occasionally, the resulting new shoots would keep up the youthful condition of the hedge.

In the formation of a new Rose garden I would suggest that provision be made for several of these hedges. They would break up the somewhat flat appearance which many modern Rose gardens are apt to assume. I hope, if ever the National Rose Society should establish a Rose garden—as they, I think, must do sooner or later if they wish to fulfil their duties as guardians of the national flower—that we shall see all such examples as the Rose hedges I have attempted to describe put into practice, so that the public may see what is possible in this direction. The wealth of variety can, in my opinion, only be made really useful in this way, and I believe that such Rose gardens will become far more numerous than they are to-day, for it is the flower above all others for English gardens, providing us with delight from the beginning of May until the snows of winter.

In conclusion, I would suggest also hedges of Moss Roses, Scotch Roses, alba or Maiden's Blush Roses, Bourbon Roses, Hybrid Perpetuals of the Ulrich Brunner type, and the Austrian Briars, not forgetting the rugosas; then, as I said before, tall hedges, if you like to shield the rosery from cold winds, composed of the glorious wichuraianas, Penzance Briars, multifloras and the various species.

FEEDING POT ROSES.

THERE is a difference of opinion among experts whether Roses grown in pots should have stores of food placed in the soil or have supplies given them as the need arises. I am strongly in favour of the latter method where pot-grown Roses are concerned, as we are enabled to give just the needful amount of stimulant, whereas if placed in the soil the roots are compelled to draw on the same whether they want it or not. What I advise in making up compost for Roses is to let it consist of good fibrous loam two parts, well-rotted manure one part, and about three pints of bone-flour to two bushels of compost. This bone-flour is very slow in its action, and the little roots are not compelled to absorb the nutriment all at once.

If the bone-flour has been omitted, a dressing may be given at once. Just cover the surface soil with it and lightly point it in with a label; but if the bone-flour has been mixed with the compost, the Roses can dispense with any other stimulant until the buds begin to show.

When they arrive at this stage, watering once a week at first, and then twice a week until the buds show colour, will be all that they require in order to produce really first-class blooms.

For liquid manure I cannot recommend anything better than cow-manure and soot, and there is now on the market a very useful infuser (Malden's) that enables one to infuse the manure in a more convenient, cleanly and rapid manner than hitherto. I would strongly recommend this to the amateur



A FINE SPECIMEN OF THE JAPANESE UMBRELLA PINE.

grower, both for use in feeding his pot Roses and for those growing outdoors. For many years soot-water and liquid cow-manure have proved to be really first-rate liquid manures. Moreover, they are inexpensive and readily prepared. The old method of dropping a bag of either soot or cow-manure into a tub of water and allowing it to diffuse has been superseded by Malden's Patent Infuser, this being quite the simplest and cleanest way of preparing clear liquid manure. P.

TREES AND SHRUBS.

THE JAPANESE UMBRELLA PINE.

(*SCIADOPITYS VERTICILLATA*.)

THIS is one of the most distinct and choicest hardy conifers introduced into this country. The *Sciadopitys* is a monotypic genus, and quite different from any other conifer. It is a native of Japan, where the Umbrella Pine is said to grow wild only on the mountains of Nippon. The tree has, however, been freely planted by the Japanese, more especially in the vicinity of their temples. The Swedish botanist, Thunberg, records its cultivation in Japan in 1776. To Thomas Lobb belongs the credit of introducing the first plant in 1853. This, unfortunately, died, but eight years later Mr. John Gould Veitch brought home seeds from Japan. The specimen illustrated is said to be one of the seedlings raised from these seeds. The tree is now 21 feet in height. Although reputedly slow in growth, this, it will be at once noticed, is unusually slow progress; but the atmosphere and dry, sandy soil at Kew, where the plant is growing, are far from ideal for the Umbrella Pine. Although perfectly hardy, the conditions favourable to the development of the tree appear to be warm, sheltered positions and a light, sandy peat with plenty of moisture in summer; lime is said to be detrimental. Several trees of moderate size are recorded as growing in this country—a specimen at Hemsted, Kent, over forty feet in height, and one in South Devon 30 feet in height—but there are no large specimens. Trees in Japan attain a height of 100 feet to 120 feet. It is an interesting fact, told me by a Japanese, that while young, transplanted trees cone in quite a small state, the wild trees grow to a very large size before producing cones. A notable character of the tree is the narrow, pyramidal shape with a tapering leader. Cones and ripe seeds are produced in this country, taking two years to mature; in fact, the specimen illustrated cones so freely that it has been thought desirable for the health of the plant to remove a large percentage of them. The cones are cylindrical in shape, about three inches long and $1\frac{1}{2}$ inches in diameter. Seeds germinate freely, but to rear them successfully great care and plenty of attention are necessary in a young state. A second means of propagation is to graft the terminal shoots on pieces of the root taken from a young tree during March or April. The Umbrella Pine will be found listed in most tree and shrub catalogues, the price varying, according to the size of the plants, from rs. 6d. to 5 guineas. A. O.

EARLY FLOWERING SPIRÆAS.

THE numerous shrubby Spiræas which bloom during the months of March, April and May form an important element in garden adornment, for all are easily grown and free-flowering, while there are few parts of the country unsuitable for them. Whether planted in beds or as groups in shrubberies, they are equally desirable, and the only thing that can be urged against them is the sameness of the colour of the flowers, for in most instances they are white, the colour of the few exceptions being cream.

Soil and Situation.—The most satisfactory soil for Spiræas is that of a loamy nature, but whether of a light, medium, or heavy consistency matters little, providing it is well drained. Aspect need not be a serious consideration, for, although plants in a sunny position give the most satisfactory results, those planted under less favourable conditions give a good account of themselves, except when shaded by large trees. A top-dressing of well-rotted manure may be given with advantage every second year, for, like other Spiræas, they are rank feeders.

Pruning.—Little in the way of pruning is necessary, and in this they differ widely from the various kinds which bloom during late summer, for they are improved by a rather severe pruning and thinning out each spring. The early-flowering kinds may be allowed to go unpruned for several years; then all that is necessary is a little thinning as soon as the flowers are over, except when plants are inclined to outgrow their positions or are becoming leggy, when their height may be safely reduced, taking care to thin out the branches at the same time.

Cuttings and Layers.—Propagation may be effected by one of two means—cuttings or layers. In the former case sections of half-ripe shoots 3 inches to 4 inches long should be taken during July and August and inserted in sandy soil in a close propagating-case. Roots will be formed in the course of a few weeks. Spiræa Thunbergii and S. arguta are, however, sometimes found difficult by inexperienced persons to root from cuttings; but no difficulty will be found in obtaining well-rooted plants if a few of the lower branches are pegged down into the ground in spring. These will be well enough rooted by autumn to remove from the parent plant, and after a year in the nursery they may be transferred to permanent quarters.

Several members of the group form excellent shrubs for forcing, and with little trouble a succession of bloom may be kept up from January to April. Although old plants lifted from borders give good results when forced, the best plants for the purpose are those grown specially for forcing. They are at their best at from two to four years of age, for about that period all the wood is young and vigorous, the plants are not overgrown, and the maximum of value is obtained from the minimum of space.

In the following selection of species, &c., allusion is only made to the more showy kinds:

Spiræa arguta.—If one kind only is required, preference should be given to this, for in addition

to being one of the most showy of all Spiræas, it may readily lay claim to being one of the best twelve spring-flowering shrubs. It is said to be of hybrid origin, and to claim S. Thunbergii as one of its parents. Growing 4 feet to 5 feet high, it forms a shapely bush of thin, wiry branches, with numerous secondary branchlets clothed with dainty, bright green leaves. The white flowers are borne from axillary buds, and make each growth a streamer of bloom.

S. chamædrifolia is a European species of rather stiff, erect habit, with grey stems, light green leaves $1\frac{1}{2}$ inches to 2 inches long, and short axillary inflorescences of white flowers. There are several varieties of this plant.

S. conferta.—This is another hybrid, its parents being represented by the two Eastern European species, S. cana and S. crenata. A superior plant to either parent, it is popular for beds and borders, while it is one of the most widely-grown kinds for forcing.



A BORDER OF WILMER'S DOUBLE DAFFODIL, ONE OF THE EARLIEST TO FLOWER. (See page 146.)

S. crenata forms a shapely bush 3 feet to 5 feet high, and bears numerous flattened heads of white flowers from short axillary shoots during April and early May.

S. media is a native of Europe and certain parts of Asia. It forms a rather tall bush 4 feet to 5 feet or so high, with the main branches rather stiff and upright, and the secondary branches of a looser character. The white flowers appear during late April and May in umbels, which terminate short axillary growths. It is very free-flowering and useful for forcing. In some gardens it is known as S. confusa.

S. prunifolia.—This Japanese and Chinese species is only worth attention by reason of its double-flowered variety, and even this is less useful for general work than several of the afore-named kinds, for it is rather susceptible to damage from spring frosts. It is, however, extremely useful for forcing, for the small, double white flowers are borne from almost every bud

on the previous year's wood. When well grown, annual, semi-pendent growths 2 feet to 3 feet long may be obtained, which are of a very pleasing character when covered with flowers.

S. Thunbergii is the earliest of the Spiræas to open its flowers. It is often at its best from the middle to the end of March, and very frequently flowers are to be found in February. A native of China and Japan, it grows 3 feet or so high, and is specially noticeable by reason of the graceful effect of its thin, wiry branches and dainty, bright green leaves. The white blossoms are small but numerous.

S. trilobata, a native of Northern Asia, is a showy shrub growing 4 feet or so high, bearing flattened heads of white flowers in May. It is, however, chiefly interesting as being one of the parents of the following shrub.

S. Van Houttei.—This is a hybrid between S. cantoniensis (a comparatively worthless species so far as this country is concerned) and S. trilobata.

It is popular for forcing, and so freely are the flowers produced that branches and young leaves are almost hidden by them. As an instance of a hybrid being greatly superior to its parents, this might be advanced as a fitting example. W. D.

THE CORNELIAN CHERRY.

THE Cornelian Cherry, Cornus Mas, is one of the earliest shrubs to bloom out of doors. In Southern gardens the flowers opened in February this year, and there is every prospect of them lasting well into April. This is undoubtedly one of the most showy of the Dogwoods, and when seen at its best it is literally smothered with tiny tufts of bright yellow flowers. These are succeeded in autumn by Cornel berries, cherry red in colour, which are much appreciated in Eastern Europe for preserves. The Cornelian Cherry is a native of Europe and is widely distributed, but it does not occur wild in this country.

THE FLOWER GARDEN.

WILMER'S DOUBLE DAFFODIL.

FOR its early flowering alone Wilmer's double, golden yellow Daffodil is worthy of a place in every garden. Known by the botanical name of *Narcissus Telamonius plenus*, this Daffodil has been grown in this country for many years, and is among the first of the large-flowered section to open its blossoms in the outdoor garden. As a plant for a shrubby border, where it may be planted in irregular clusters, it has few equals, and if left alone will increase and last in good condition for many years. It is also a good Daffodil for planting in grass, and, indeed, in almost any position where early flowers are appreciated. Despite its double flowers, it is not easily damaged by rough weather, and for cutting it is exceedingly useful. It is true that the flowers are not nearly

delay in carrying out the operation, because it is desirable that the roots shall have an early opportunity of commencing to establish themselves in their flowering positions; therefore planting must have consideration.

Preparing the Soil.—There is no gainsaying the fact that the Carnation—and readers must be good enough to accept this name as including also the Picotee—appreciates a deep and cool soil which contains readily available food and lime. When, then, the preparatory work is put in hand, the deeper the soil can be made friable the better the results are likely to be. No one should rest satisfied with less than two full spits, or about twenty inches, and, if it is not difficult to go still deeper, do not hesitate to do it, as the results will fully justify the efforts made.

In the use of manure some judgment must be exercised, and the convenience of the cultivator must, of course, be taken into consideration.

when the weather is wet, or trouble is bound to ensue; but if it is in suitable condition, nothing except good can follow the firming.

It has already been said that lime is essential to the most gratifying results, and it must be incorporated with the soil. Precisely what form it will take must necessarily depend upon various circumstances, but crushed lime or mortar rubble is excellent, as it yields the requisite lime and, at the same time, aids in the amelioration of an unkind medium. But each grower must use that which is most convenient to himself in this direction.

Planting.—This process demands care, of course, but it is easily carried out. It is improbable that there will be the slightest check to progress unless the roots have matted extremely hard round the old ball of soil. If this condition prevails, loosen the sides very carefully to release them from their uncomfortable and unsatisfactory state; but they must not be torn or broken, or more harm than good will be the result. The crotch or crotches at the bottom are removed, the soil is loosened round the sides, and the surface is scratched away at the same time. The hole must be deep enough to accommodate the ball with a covering of 1 inch or 2 inches of soil, and it must be firmly surrounded and left with a slight fall towards the plant when complete. There is a possibility that this fall will be a disadvantage in a heavy soil, should the season prove to be a wet one; but even so, it can easily be drawn to the normal level or given a fall from the plants if such is judged to be desirable. In a dry time the depression facilitates the application of water and is a decided advantage. All planting should be completed by the end of the first week of April if possible.

SNOWDROPS AT ST. MARY'S ISLE, KIRKCUDBRIGHT.

I KNOW of no place in Scotland where there are more Snowdrops, or where they are grown in a more delightful way, than at Captain Hope's charming place at St. Mary's Isle, Kirkcudbright. It is impossible to hazard a guess as to the number of Snowdrops there are in the grounds, but there must be many millions of these lovely flowers. They are literally in acres. What adds to their beauty and to the appearance they give is the fact that they are not in huge stiff groups together, but are scattered over the extensive policy in great sheets of the most informal outline. In some places, as shown in the accompanying illustration, they are in close, irregular masses, with but little space between the bulbs; but in others they are just as if they had sprung from seeds, as they certainly have, and are scattered in the most natural way.

It would be impossible to conjecture the time of their introduction to these grounds, but they probably date from the time of the old Priory of St. Mary, which was founded in the days of King David I. of Scotland, and they must have been spreading since then. They are in all parts of the grounds, on sloping banks by the trees, among the copsewood by the banks of the estuary of the River Dee, and in sheets in the more open parts,



SNOWDROPS NATURALISED IN THE WOODLAND AT ST. MARY'S ISLE, KIRKCUDBRIGHT.

so graceful as some of the single varieties, but what it lacks in this respect is more than compensated for by its earliness and general utility. This year it has flowered earlier than usual, and many blossoms were noted outdoors in the London district in the second week in February. The illustration on page 145 represents a narrow border of this Daffodil, and gives some idea of its beauty when massed in this way. B.

SEASONABLE NOTES ON CARNATIONS.

Plants in Frames.—Generally speaking, the rooted layers which were potted up last summer and early autumn have passed the winter splendidly, and are now in excellent condition. If the lights are continuously off, there is no material hurry to get them out into the open beds or borders, but there should be no unnecessary

Whatever is used should be thoroughly rotted, and it ought to go down at least 12 inches beneath the surface, so that it shall be away from the roots. Some amateurs fear to put the manure down in the manner suggested, thinking that the plants will not derive the full benefit of it; but this is an error, as the food rises to the roots in the form of moisture, and as long as the soil is maintained in correct condition this process is constantly proceeding. The ideal Carnation soil is a loam that is just on the strong side, and to improve the fertility of this, horse or farmyard manure is the best while for light sandy ground I should choose cow-manure if I were able to procure it, as it is cooler in nature and increases the moisture-holding power of the land. In addition, a sandy soil also demands consolidation. The roots of Carnations do not like a loose soil, and it is therefore wise to tread thoroughly before any attempt at planting is made. This must not be done

and all are in the most delightful informal masses conceivable.

What is rather remarkable is the little variation that exists among the plants, many of which must be seedlings. There is, as one would anticipate, some little variation in point of the time of flowering and a little in respect of the size of flower, but the whole of the flowers may be said to be practically the same. This would point to a common ancestry, as I have little doubt was the case. They have descended, in all probability, from the original flowers brought there in the time of the ancient Priory, of which nothing now exists.

Dumfries.

S. ARNOTT.

THE GREENHOUSE.

A NEW PELARGONIUM.

ON the front cover of this issue is seen a coloured plate of the handsome new Geranium, or, to be strictly correct,

Zonal Pelargonium, known as His Majesty. It is a variety that at once appeals to the onlooker, on account of its bold trusses of rich scarlet flowers. Individually, the flowers, or "pips," as they are often called, are of exceptional size, and they are borne in wonderful profusion. When shown before the Royal Horticultural Society by Mr. W. H. Page, Hampton, two years ago, it created quite a sensation, and the attention of specialists and visitors was at once riveted upon the prize. It was then that it received a unanimous award of merit, the highest award a florist's flower could obtain from this society. As an autumn and winter flowering variety it is quite the best of its colour yet introduced. It is particularly good in the greenhouse from September to June, and is a superb variety for conservatory decoration. It has a splendid habit and makes a fine pot plant; but it will be necessary to wait another season, so that its bedding qualities may be fairly and more widely tested.

Cultivation.—To grow the so-called Geranium is simplicity itself, and it would be hard to name a more popular plant for gardens of every description. For winter flowering in the greenhouse or conservatory there is no better time than the present for taking cuttings. The plants should be grown on, giving them a light, airy house or pit. At all times it should be borne in mind that the plants require an abundance of sun and air, for it must not be overlooked that the original species came from the plains of South Africa, and the plants are naturally adapted to pure air and sunshine. On no account must they be coddled, and from midsummer onwards the plants should be placed in the open on a bed of coal-ashes. All flower-buds must be picked off until the plants are brought into the greenhouse; that is to say, in September.

Zonal Pelargoniums used only for summer bedding are best propagated from cuttings taken in the late summer or early autumn. These cuttings are obtained from the plants outside when the flowers begin to decline.

LILIES FOR GREENHOUSE AND GARDEN.

THAT the amateur or beginner is ever ready and alert to receive gardening hints of a practical nature, hints which bear on their face the impress of directness and sufficient of cultural details to

pots of Lilies, though minus a near professional from whom to draw the requisite supplies of information; hence a few remarks at the present time may not be out of place.

Making a Start.—The friend to whom I have referred purchased his bulbs in March; and though for some purposes this would be accounted late, it is certainly not so for the object one has in view, and still less so when we consider the class of bulbs available. These latter are largely importations from Japan, and as they reach this country in a rootless condition, they have a strong dislike for wet soils at the start. The direct result of planting in the open ground, say, a few weeks back, would probably mean failure, either wholly or in part. At such a time the wetness, the very coldness and uncongenial condition of the soil would be sufficient almost to cause disaster; hence, from many points of view, the amateur will have gained rather than lost by the wait.

A Question of Soil.—And just as soil coldness and wetness is opposed to success in the open-air plantings of these bulbs, so is it also prejudicial to it when the plants are grown in pots. Hence the first direct hint of practical importance is that the soil be moderately dry—that is to say, so dry that stickiness or adhesiveness is unknown. Let me say at once that the usually crude soils of the garden are not suitable, and where no other exists, the beginner should get a sack of prepared soil from the nurseryman or florist. The soil should be rich, light and moderately sandy. Crude manures should be avoided.

Pots and Drainage.—Clean pots only should be used, so as to ensure, as far as is possible, healthy surroundings for the roots. This item of cleanliness is too often ignored by the amateur, though its importance is great, and a few minutes of such work is well repaid by appearances alone. The drainage, too, must be perfect, so as to preclude the possibility of stagnant moisture about the plants. Perfect drainage, too, supplies a natural warmth to the soil, which, while most desirable, is also of the

hygienic order. But let us take a few illustrations and see how best to secure the end we have in view.

Lilies of the Auratum Set.—*Lilium auratum*, the Golden-rayed Hill Lily of Japan, is one of the noblest of Lilies and one of the most prized. I had almost written "popular," and it might be this, and prized also, did greater success attend its cultivation in this country than is now the case. The many failures are largely due to the system of cutting away the roots prior to shipment from Japan. Happily, however, all the varieties of this Lily are great stem-rooters, and the fact is of the highest importance. The roots appear on the stem immediately above the bulb; hence the latter should be so placed that a majority of the roots are enabled to feed upon the soil, and assist to bring about a good flowering.

E. H. JENKINS.

(To be continued.)



A COLONY OF SAXIFRAGA APICULATA, AN EASILY-GROWN PLANT FOR THE ROCK GARDEN. (See page 148.)

bring success more or less complete in their train, no professional gardener would attempt to deny. This much has been obvious to my mind many a time, though perhaps never more forcibly driven home than it was a year ago, when a neighbour was seized with a desire to grow some Lilies in pots. He had been fascinated by the graphic description of a friend's success, and without more ado had purchased some bulbs, hardly knowing what step to take next. He had, however, thoughts that he might get all the information he wanted at first hand from the writer, and my gardening instincts did not permit him to appeal in vain. His purchase of Lily bulbs consisted of *L. auratum*, *L. a. platyphyllum*, and some splendid bulbs of *L. speciosum Meipomene* and *L. s. magnificum*. Now, it has occurred to me that many another beginner might be desirous of indulging in a few

THE ROCK AND WATER GARDEN.

AN EARLY-FLOWERING SAXIFRAGE. (SAXIFRAGA APICULATA.)

MANY a rock garden is brightened from the early days of March till the end of April by the presence of this charming Saxifrage. It is well known to be one of the earliest to flower, and even when not in flower, its dense foliage, carpeting bare ground and clothing rocks and banks in summer and winter, makes it in every way a desirable plant for the rock garden. The flowers are pale yellow, and the illustration on page 147 gives one a good idea of the freedom with which they are produced. There is a shadow of doubt about the origin of *S. apiculata*.

permit of planting. Should this not be possible, plant the roots firmly in round baskets about three feet across and 1 foot in depth, lowering these into the water. The soil for Water Lilies should consist largely of good turfy loam. Add to this some half-decayed leaves and a little cow-manure. The surface of the baskets must be covered with large turves to prevent the water washing out the finer soil. Nymphæas thrive best in sheltered (but not shaded) positions, sun being essential to success. The water should be still and not liable to frequent changing, or the cooling of the water in summer will be detrimental. Lifting, dividing and replanting may be done towards the end of March or during April. The flowering season commences in June and lasts until October.

Water Lilies in Tubs.—Those who have not the good fortune to possess a pond or tank

to 8 inches across; *alba candidissima*, white; *Colossea*, light flesh pink; *gladstoniana*, very large, pure white; *James Brydon*, rose crimson; *Marliacea alba*, carnea, ignea, rosea and chromatella; *William Doogue*, pink; and *William Falconer*, darkest red. A selection of smaller-growing sorts as follows will be preferable for tubs: *Laydekeri rosea*, fulgens, lilacea and purpurata, pygmæa (white) and the yellow variety, *Helvola*. The *Marliacea* set already mentioned are excellent for large tubs. A. O.

THE FRUIT GARDEN.

PEACH AND NECTARINE TREES.

YOUNG trees which have been recently planted will need to have the soil over and about the roots thoroughly firmed previous to finally securing the young shoots to the walls or trellises. I am no advocate for hard pruning young trees, but attention in this respect requires good judgment, and should be regulated according to the state and conditions of the trees at the time they are planted, so as to form the groundwork of an evenly-balanced head.

I think it almost needless to remark, except for the inexperienced, that the main point to be observed in training the Peach and other trees is the maintenance of equality of vigour and growth on both sides of the trees; and the greater care used in preventing any material derangement of the equilibrium, especially during the early stages of development, the more easy will the trees be subsequently managed.

Disbudding is the next consideration, and is one of the most important items of fruit garden labour which should never be left to the inexperienced. This consists of the removal of ill-placed new growth, which, if allowed to remain, would prove very harmful to the trees. I usually remove all growths coming straight from the wall and those behind the branches the first time of going over the trees, keeping the eye on all shoots wanted to build up a good foundation, and as these advance in growth they are neatly tied to the wires or tacked to the walls, taking great care not to tie them in tight enough to bruise the green wood. If the young trees are gone over about three times and the young shoots reduced to the required number, very little further attention will be necessary during the first year, with the exception of keeping the foliage clean and healthy and new growths secured in the desired positions. When rubbing off or pinching the shoots not wanted, it is most desirable to retain on the upper side of the older wood the first strong break, then a few alternately and the leaders.

I have for many years taken a keen interest in Peach culture, and if well looked after I invariably find the trees crop as regularly as, or more so than, is the case with any other kind of fruit. Protection in some seasons may not be desirable, but in our fickle climate it is well to be on the safe side.

Glass coping and blinds are probably the best means of saving the blooms during sharp weather; but in the absence of these, much can be done by using two or three thicknesses of fish-netting, or by placing at intervals a few pieces of Portugal Laurel behind the branches.

Wrotham Park, Barnet.

H. MARKHAM.



HARDY WATER LILIES IN A SMALL POND.

It occurs wild in the Pyrenees, and is believed by some to be a hybrid between *S. rocheliana* and *S. sancta*. Like the last-named, it is classed among the spiny Saxifrages. It shows a decided preference for a limestone soil, and is well adapted for the sunny side of the rock garden. Unlike some species, it is not likely to become scarce in cultivation, for when given suitable conditions it grows with great freedom, and appears to be quite capable of taking care of itself.

WATER LILIES.

IN gardens where a sheet of water exists it is a comparatively easy matter to grow Water Lilies. Rather shallow water is necessary. It may be deep in the centre of large sheets of water, but in this case there is usually ample space for Water Lilies near the edge, where they not only thrive better, but are more easily examined. The depth may vary from 1 foot to 4 feet, or perhaps 5 feet. At the last-named depth the building up of soil in mounds in which to plant the Nymphæas will bring them within a reasonable distance of the surface. This is assuming the pond or lake can be lowered to

suitable for Nymphæas need not despair of growing them. A very pretty water garden is possible with a few tubs sunk in the ground, placing rock-work round the edges to hide the rim. By this means every suburban or villa garden may have its Water Lilies. Suitable tubs may be easily secured. Paraffin casks sawn in half are favourite receptacles for this purpose, thoroughly charring the inside to remove all traces of oil before using. Pickle or treacle barrels also answer the purpose, the larger the better. A depth of at least 2 feet is desirable. This will allow for soil in the bottom and at least 1 foot of water above the Lilies. Having planted the Lily roots in the soil, place several large turves over the finer soil to prevent it rising, and fill the tubs with water. For a few days the water will be muddy, but this will soon disappear. The gradual waste of water during the summer must be replaced, preferably with chilled water.

Varieties to Grow.—A dozen of the best varieties for lakes and ponds may be selected from the numerous varieties in commerce as follows: *Gloriosa*, dark red or crimson flowers 6 inches

GARDENING FOR BEGINNERS.

SUCCESS IN SEED-SOWING. WHAT TO DO AND HOW TO DO IT.

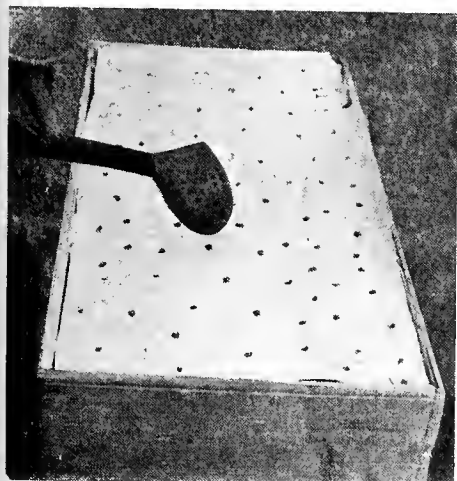
The amateur who possesses only a cold frame, or possibly an unheated greenhouse, for the raising of seedlings is often discouraged. It



1.—SEED-BOX WITH SIDE REMOVED, SHOWING DRAINAGE IN BOTTOM COVERED WITH ROUGH MATERIAL AND FINE SOIL ON THE SURFACE.

may be that in former years failure has courted all his efforts, and instead of having bounteous displays of half-hardy flowers, the majority of his plants have never got beyond the seedling stage, if, indeed, the seed has germinated at all. That a little artificial heat is a great aid in the raising of half-hardy annuals, as well as such kitchen garden crops as Tomatoes, no one will deny. Yet it is by no means indispensable. Indeed, seedlings raised in a cold frame or greenhouse by amateurs are usually more sturdy and better in every respect than those raised by inexperienced cultivators in artificially-heated structures.

Boxes and Seed-Pans.—The receptacles in which the seed is to be sown need to be selected with some care. Boxes or pans 3 inches or rather more in depth are preferred by many; but where only a little seed of a kind is needed, an ordinary flower-pot, 5 inches or 6 inches in diameter at the top, answers well, and does not take up a lot of room. Whatever is used must be scrupulously clean and have ample outlet at the bottom for waste water; stagnant moisture in the soil kills



3.—TO AVOID WASHING SMALL SEEDS OUT OF SOIL, WATER THROUGH PERFORATED PAPER OR COARSE MUSLIN.

more seedlings under cool conditions than anything else. The boxes ought to have holes three-quarters of an inch or 1 inch in diameter in their bottoms, five holes not being too much for a box measuring 15 inches by 12 inches. Over these holes a layer of broken pots, or crocks as they are termed, must be placed, then some rough fibrous material, and, finally, the fine, sifted soil. Fig. 1 shows a box with one side removed. Note the crocks and rough and fine soil. This is a large box; consequently a dividing board is placed across the centre so that two kinds of seed may be sown in it, one at each end.

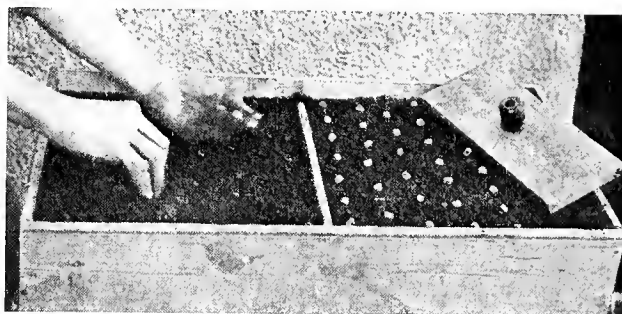
Soil for Seed-Sowing.—This is quite as important as the drainage. For the majority of the seedlings that the average beginner is likely to want to raise, the following mixture will answer well: Good turfy loam, well chopped and passed through a 1-inch meshed sieve, two parts; leaf-soil, well decayed and sifted through the same sieve, half a part; and coarse sand, half a part. Retain the coarse material that is left in the sieve for placing over the drainage. In some localities it is difficult to procure turfy loam, but every endeavour to do so should be made, as there is no good substitute. With leaf-soil it is different. Coconut fibre refuse or Hop Manure may well take its place. Having placed the drainage and soil in position, as shown in Fig. 1, press the whole down gently with the presser shown at the right of Fig. 2. The edge of this is useful for making lines when it is desired to sow the seed in rows.

Sowing the Seed.—If there is one thing more than any other that the beginner needs warning against, it is thick sowing. No matter how often this warning is given, it is seldom fully accepted, and thousands of seedlings are wasted every spring by too thick sowing. Seeds differ very considerably in size, and it is not difficult to place the large ones separately, as is shown at the right of Fig. 2. Very small seeds are difficult for the beginner, who may be excused for sowing them too thickly. As an aid to the thin sowing of these small seeds, mix them with some dry silver sand, as shown at the left of Fig. 2. This will make a greater bulk and, if the mixing is well done, will ensure a thin and even distribution.

Covering the Seed.—After the seed is sown it must be covered. Here, again, there is a great deal of difference to be observed. Thus, very small seed, such as that of Petunia, will only need pressing into the soil with the presser shown in Fig. 2; while that of Asters, Zinnias and African and French Marigolds will need a quarter of an inch thick covering of fine soil. The larger the

seed the greater the depth of soil for covering is a good general rule to follow. Do not press down the covering soil except just to make it level, and it is well to have rather more sand in it than is used for the mixture previously advised for sowing.

Watering.—It is no uncommon occurrence to find choice seed that has been carefully sown washed out of the seed-pans or boxes during the process of watering, or, if not actually washed out, carried all to one side, owing to the receptacle not standing level. Therefore, stand all seed-pans, boxes or pots as level as possible and use a fine rose on the watering-can. For very small seeds a sheet of paper, freely perforated with holes, as shown in Fig. 3, may be laid over the soil before watering, or a piece of coarse muslin may be utilised in the same way, although this is apt to adhere to the soil. Pots and small pans can be immersed nearly to their rims in a bucket of water, allowing the liquid to saturate the soil from below upwards. After the sowing and watering are completed, keep the frame or house fairly close until germination has taken place, after which ventilation must be



2.—LARGE SEEDS CAN BE PLACED SEPARATELY, AS SHOWN ON RIGHT; MIX SMALL ONES WITH DRY SAND TO ENSURE EVEN SOWING. THE PRESSER ON RIGHT WILL MAKE SOIL LEVEL.

afforded as freely as outside conditions will admit. Give water whenever the soil is at all dry, but avoid overdoing it. Remember, seedlings in an early stage do not want large quantities of water; but, on the other hand, they must not be allowed to become dry. Subsequently they will need transplanting, and this will be dealt with in the course of a week or two.

HOW TO GROW LARGE MARGUERITES.

By large plants I do not mean those that are tall and possess long, leafless stems, but those that are very bushy and compact. Marguerites are invaluable plants for tubs, vases, window-boxes and pots, as well as for bedding-out in the summer. Plants that were potted in January and the early part of February should now be repotted into pots 1½ inches larger. It is really wonderful what good progress they will make when so treated, and these specimens are the best for vases, large tubs and window-boxes. It is a mistake to subject Marguerites to great heat at any stage of their growth. Cool frame treatment is the best; ventilate freely and only cover the lights to keep out frost.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Greenhouse.

Spiræas.—*Spiræa astilboides* and the newer pink varieties *Peach Blossom* and *Queen Alexandra* may be started at intervals in a warm house. Avoid overpotting. Once they have started into growth they must not be allowed to suffer for want of water. As they dry up very quickly, it is well to stand the pots in saucers, keeping the latter filled with water.

Seedling Cyclamen.—Encourage the young plants to grow in a warm house with a moist atmosphere, and keep them near the glass to induce a sturdy habit. Syringe freely and lightly. Keep a sharp look-out for thrips, which soon cripple the foliage. Fumigate if necessary.

Hydrangea paniculata grandiflora.—If a few plants of these are placed in a warm house, they will make good flowering plants. Prune back last year's growth to a few buds of the base. An early forcing-house will bring them along nicely.

Polygonatum multiflorum.—A few roots lifted of this plant may easily be had in flower in advance of those out of doors, and the subject forces readily. When growing freely, give plenty of water.

Schizanthus.—Few greenhouse flowers nowadays are more popular. They are easily raised from seed, and by sowing batches at intervals may be had in flower nearly the whole year round, and the different varieties provide a range of colours unequalled. Plants growing freely which have filled the pots with roots will benefit greatly by applications of manure-water. Pot on younger plants as becomes necessary, and whatever stage of growth they are in, attend to the proper support of the plants.

The Kitchen Garden.

Rhubarb.—If it is desired to increase the stock or make new beds, the work should be done without delay. Select a piece of ground that has been well dug and liberally treated with manure. When planting, remember that much space is required when in full growth, and 4 feet between the rows and the same distance between the plants will not be too much. Plant good crowns singly and make very firm.

Forcing the Growth.—Cover some of the crowns on permanent beds with large pots or other receptacles from which light is excluded, and place some fermenting material round them.

Seakale.—As soon as the weather permits of planting being done, the sets or root-cuttings will need putting out into the open ground to make material for forcing next winter. An open site suits this crop best. Insert the cuttings with a dibber in rows 18 inches apart and 1 foot between them.

Vegetable Marrows.—Make a sowing now of these for planting out later in portable frames on hot-beds. Sow the seed singly in small pots and raise in a brisk heat. These may subsequently be potted on before planting out permanently.

Leeks.—Make a sowing of these and raise in a cool house for providing later supplies.

Broad Beans.—A sowing may be made on a warm border as soon as possible now, or raised in boxes and planted out when nicely germinated; Peas may be treated in a similar way.

Cauliflowers.—Providing they have been thoroughly hardened off, a batch of plants may be placed on a warm border; but if the protection of hand-lights, or even a few Spruce boughs, can be given them for a time, growth will be considerably accelerated.

The Flower Garden.

Irish Kæmpferi.—This beautiful subject should be planted without delay. In many places this does equally well in drier spots, though it certainly is best known as a subject for the water's edge. Treat the ground liberally with manure and deeply work it; then it is possible to include it in the herbaceous border.

Hardy Annuals.—In warm positions a sowing of suitable varieties may be made when the ground is in perfect order for so doing. Knock down the surface with a fork and sow thinly.

Alpine Auriculas.—Seed may now be sown of these lovely flowers, and if purchased from a reliable strain many good varieties will emanate. A word must be given here as to watering seedlings, which

I do not think I have previously mentioned, and especially with fine seeds. Though a very fine roset can be well suited, it is better to stand the pans or pots nearly to the rim in water until the whole of the soil has become thoroughly moistened.

Seedlings.—Transplant seedlings of Phloxes, Pentstemons, Delphiniums and other perennials when large enough into other boxes, and grow on in a cool frame. For a time keep them fairly close and avoid too much humidity; but when they have recovered from the shift, gradually give more air.

Verbenas.—Pot off the cuttings of these singly into small pots when nicely rooted, and in a week or two stop them at the point to encourage a branching habit.

Fruits Under Glass.

Early Vines.—For the present sufficient air will be afforded through the top ventilators without having to resort to the front ones, the opening of which is liable to cause draughts, except on very warm days.

Thinning.—This operation needs careful consideration and care in doing, and depends much upon the variety in question. For early Grapes it is best carried out twice over. The first time remove all small and badly-placed berries and those inside the bunch. If the shoulders are left, these should be neatly looped up to the trellis with twisted strands of raffia. A mat placed underneath the bunches will ensure cleanliness.

Successional Vines.—As the growths strengthen and it becomes necessary to tie them down, this must be done gradually, otherwise these may snap out at the base. It is best done in the morning and a tie made with a slip-knot, so that it can be untied later and the shoot brought down lower.

Cucumbers.—Encourage these to grow freely by maintaining a warm, growing temperature and syringing twice daily when the weather is bright. Attend to the stopping and tying of the growth as this becomes essential. Fertilisation of the flowers is unnecessary.

Early Peach Trees.—To keep the trees shapely for another year, the young growths as they mature must be regularly trained. The first tie should be made as near the base as possible, and secured to the last year's growth. Thinning of the crop should not be too rigorously carried out until the stoning period is past, and must always be done in a gradual manner. Give the trees water as necessary, and especially where the borders come in close proximity to the hot-water pipes.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Indoor Fruit.

Figs.—These will be starting growth anew. All they ask for at present are a not too dry atmosphere and a much warmer temperature than Vines at the like stage, 60° at night being suitable, with a proportionate rise in the daytime.

Muscat Vines.—If started six weeks ago, the growths will be sufficiently advanced to permit of a reduction. These, if in good condition, "show" far more bunches than the Vines can carry, and, therefore, all the shoots that are obviously below the average strength may with advantage to the health of the Vines be removed.

Late Varieties.—Lady Downe's may now be kept warm enough to induce growth, but there is no need to apply fire-heat for that purpose. The buds will break much stronger if allowed to come away slowly. Alicante, another easily-grown Grape, may be treated in the same way, only it grows faster and may ask for more attention as regards early closing.

The Kitchen Garden.

Broccoli.—In fine weather the heads will turn in daily and want attention accordingly.

Cauliflowers.—Those potted up from early sowings, if well rooted, may have the water with which they are moistened slightly strengthened with soot or sulphate of ammonia. Give abundant ventilation.

Spring Cabbages.—An early dish may be looked for now or soon. Meanwhile stir the surface soil when dry, and before doing so apply a dessert

spoonful of artificial manure to each plant. Pigeon-manure is also of much benefit sprinkled between the rows.

Celery.—What is left of the crop may be lifted, should the ground be wanted, and stored in sand in a cold shed, standing the heads upright, of course. Seedlings are, perhaps, ready to prick out, and where a large quantity of Celery is grown, it is best to set apart frames for the purpose. A compost of equal parts of soil and Mushroom-bed refuse laid in the bottom of the frame to a thickness of 2½ inches or so when firmed suits them. A space of 3 inches to each plant is needed, and once moistened, the compost absorbing a good quantity, no water will be required for some time. The later batch should be kept quite cool.

The Flower Garden.

Narcissus.—A slight sprinkling of super-phosphate of lime between the rows will help the bulbs for next year.

Hellebores.—The early-flowering kinds now going over should have all the decaying foliage and decayed stalks removed, and a mulch of manure applied to the surface to strengthen the new foliage, and so obtain good crowns.

Schizostylis coccinea.—This useful plant should have the beds often renewed, not longer than two years to elapse between. In Scotland it asks for a warm, sheltered position somewhat dry; but it is essential to provide the ground with a liberal supply of rotted manure to carry the plants through the summer. Plant only the strongest unflowered growths.

Romneya Coulteri.—The partially-ripened late shoots have been damaged considerably, and these should be cut down quite close to the ground, undamaged ones being left unpruned. It is a mistake to leave all wood, which weakens the plants and is at best of slight value for flower production.

Gladiolus.—In the less cold districts planting may be proceeded with in the various sections which flower in autumn. Very late kinds, such as *Baron J. Hulot*, slightly started may also be planted, though in late localities it would be better to refrain from doing so for some weeks, the plants meanwhile being allowed to grow slowly in a cool structure or frame.

The Greenhouse.

Tuberoses.—Potted at once, three in a 6-inch pot and grown coolly, a nice lot of flowers will be obtained in autumn and the early part of winter.

Plumbago rosea.—If no cuttings are to be had or are deficient in quantity, the stems cut into short lengths, each with an "eye," root freely and produce nice flowering plants by December. This is a hot-house species and invaluable for table decorations.

Lobelia Kathleen Mallard.—Though this variety is unsatisfactory for flower gardening, it is charming as a pot plant for the conservatory, and enough cuttings, which will root in a few days, to make up the required number of pots should now be taken. Several, when rooted, may be planted in 5-inch and 6-inch pots, which they will soon fill and become smothered in bloom.

Mimulus glutinosus.—This plant provides a distinct colour in the greenhouse during the summer months, and nice specimens may be grown in 6-inch pots and quite large ones in those two sizes larger. This is the time to pot on established plants, those in the former size into 8-inch pots, while those in 8-inch pots should be turned out, the ball of each considerably reduced, and repotted in the same size. One stick is enough to support each plant, which should not be too trimly tied in.

Roses.—Those in houses with a little heat are now well forward and will need close attention to keep green fly from gaining a footing. Fumigation is the best preventive and remedy, and much to be preferred to constant syringing. The plants will consume large quantities of water strengthened with dried blood in the proportion of 1oz. to four gallons of water.

Topiary Work.—Variegated Yews and other shrubs should be trimmed. The Roman Cypress also should be trimmed at the same time. None of the usually shorn subjects thrives better under the shears than this, those cut in autumn being more than ready for shearing again. It is the finest of all evergreens for pillar specimens. Green Yews if pruned in autumn need not be trimmed now.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

HYBRIDISING DAFFODILS.

EVERY year, if a census could be made, it would be found that the number of Daffodil enthusiasts is increasing. Sooner or later a large proportion of the new-comers want to begin to try to raise some seedlings of their own. Over and above the pleasure of seeing our own seed develop and in a few years' time grow into



1.—TAKING POLLEN FROM THE ANTHERS WITH A CAMEL-HAIR BRUSH.

a flowering plant, there are such infinite possibilities of colour, size and form, which tend to make us as keen as mustard to try our hand at this fascinating pursuit. The beginner has only to get over the first three or four years of waiting, and then, if he crosses or hybridises every season and sows the seed every July, each successive spring will give him an interesting and, it may be, a profitable harvest.

I strongly advise everyone who has any Daffodils at all to make a start and to remember that the well-known saying, "No time like the present," is peculiarly applicable to the would-be raiser of Daffodil seedlings. Do not lose a year if you can help it. Begin straight away in the present year of grace. Cross-fertilise; if you can, hybridise. Now, a little timely preparation will assist matters considerably; hence this note of warning.

First.—Think what you want to do, that is, what types of flower you are going to try for. Remember that a trumpet crossed with a Poet produces an incomparabilis or a cupped variety; a Poeticus crossed with a Tazetta, a Poetaz; a white trumpet with a small-cupped Leedsii; a giant Leedsii; a white trumpet with a Poeticus, a Leedsii; an incomparabilis with a Poeticus, a Burbidgei. It is not necessary, however, to keep to these stock crosses. I fancy there is no limit to the crossing that may be done, and the more unconventional it is, the greater the chance of some

novelty. If anyone has not many varieties to make many crosses, I think it might be worth while to try to get a few pods of seed from putting the pollen of one variety on to the stigma (top of pistil) of another flower of the same kind. This is strict cross-fertilisation, and the progeny ought to have great vitality. But to get hybrids it must be borne in mind that the flower from which the pollen is taken must be of a different species from the one on to whose stigma it is put.

Secondly.—The mechanical means by which this is carried out is shown in the illustrations on this page. In both flowers the trumpet or cup has been removed, so as to expose the pistil (the centre organ, the top of which is called the stigma) and the stamens (the circle of organs round it, with large ends—anthers), which in time burst and set free a large amount of fine dust (the pollen). The object of the hybridiser is to convey the pollen from one flower to the stigma of another of a different type. It is done by means of a camel-hair brush, which may be slightly moistened in one's mouth and applied to the *burst* anthers to collect some pollen, which is then applied to the stigma of another flower. In order to preclude any chance of self-fertilisation, the anthers of the seed-bearer (the pistil-bearing or female flower) must be removed *before they burst*, as shown in Fig. 2. Another thing to remember is that pollen will keep good for ten days or more if it is kept in a perfectly dry little box with the lid just tilted so as to admit a little air. Common pill-boxes do excellently for the purpose. After the cross is made, it should in some way or another be noted either by a little label or a stick attached to the seed plant. We then know what the seed is when it is gathered.

Thirdly.—The stock-in-trade is not very much, but it should be ready. This is it: One pair of small, finely-pointed forceps for taking off the anthers before they open; one or two small camel-hair brushes for conveying the pollen; half-a-dozen or a dozen small common pill-boxes for holding pollen; raffia or wool; some labels and sticks (I use the latter only myself, and put one to each fertilised flower with the name or number of the pollen parent on); and a notebook.

Lastly.—It must be remembered that the best time to carry out these operations is between 10 a.m. and 4 p.m. on a bright, warm, sunny day; but as beggars cannot be choosers, we have very often to operate without these ideal conditions being present. It is best in cold and sunless weather to try to repeat the cross and apply the pollen more than once. Again, be most particular about having both the camel-hair brushes and the pill-boxes very clean. The pollen grains are so small that one cannot be too particular. When the seed-pod is swelling, we cannot help wondering what it will contain; but I must prepare beginners not to expect every big pod to be full of nice, shiny black seeds. Alas! again and again the promise has been one thing and the result another. A last word must be. Watch very carefully for the time when the pods begin to turn yellow. When this happens, I make a tiny incision, and if the seed within is black, I know the time has come when it may be gathered. I then take off the pod with an inch or so of stem and place it in an open cardboard box in some dry place, where it remains until it has opened and the seed has been shed.

J. J.

DAFFODIL NOTES.

The Mild Winter.—My old friend Mr. W. B. Hartland sent me as long ago as last January a Daffodil bloom which had been picked in the open at Ard-Cairn on January 16. It looked like a seedling from Daniel Dewar. This must be a record even for mild Cork, for he wrote (and he has now passed the Psalmist's three score and ten years) that he had never picked a bloom from the open so early before.

The Effects of the Hot Summer.—Trumpets and Poets, from their behaviour in pots, have stood it well, and have, I think, benefited by it. Other kinds seem to have felt it severely. Seagull, Evangeline, Southern Star, Castile and many others which are usually to be relied upon as being good pot plants are small, and have weaker stems than usual. Blackwell stands out as one of the exceptions, and so does Eyebright. The diminution in size may be partly accounted for by the abnormal quantity of "grass" that the bulbs have thrown up. Even single-nosed bulbs, which I carefully picked out and noted on the labels as such, have obviously split up and given a good deal of foliage. This means smaller flowers. Why, however, should the heat cause it? It would be interesting if growers would give their experience in this respect.

Daffodils Under Glass.—In the week before the Spring Bulb Show it was my good fortune to see what was to be seen at Messrs. Cartwright and Goodwin's at Trimpey, near Kidderminster,



2.—THE POLLEN TAKEN FROM FIG. 1. IS TRANSFERRED TO THE STIGMA OF THE SEED-BEARING FLOWER AS SHOWN.

and at Mr. Walter T. Ware's at Inglescombe, near Bath. Needless to say, I had a great treat. I came away with two outstanding impressions—first, that the best thing for red-edged Daffodils is to bloom under glass in March before the sun has too much power. They do not burn then, and their beauty lasts until "their dying day, Sir," very different from what, alas! we know happens

outside. There they are more sensitive than the most delicate complexion. The other point was the value of a cool house for keeping them in when they are fully or almost fully out. My own that answers to this description is always full of *Lachenalias*, and I have to keep them where they are a little too warm. I am a loser in this respect, for it is very wonderful what a time they may be kept if the position is not a very sunny one, or if a certain amount of shading is done on very bright days. Two excellent plants for this purpose are *Blackwell* and *Eyebright*. *Seagull*, which is equally good, has this year not been up to its usual form, and, as a rule, has been poor and small. As an early trumpet I am very partial to *Stromboli*. It is a good firm flower, with a yellow trumpet and a pale primrose campanulate perianth. It is a fairly large bloom and, as far as my experience goes, always comes early. *Olympia* I saw at Mr. Ware's. I have had my eye on it for some two or three years, and as a real big thing in the way of trumpets I can confidently recommend it. It is a rough flower and of no use for showing, but it appeals to the uneducated *Daffodil* eye by its very unevenness; at least, our semi-educated parish schoolmaster spotted it among all my nice flowers as the one he liked best. "Why?" I asked. "Because it is not so even as most of them," he answered.

Bulbs After Flowering.—I find that if good-sized pots have been used, and if they have not been crammed with bulbs, with very little care the bulbs may be ripened off in them without being turned out. I half bury mine in light soil, so as to conserve moisture for the roots. They are put close together and the spaces at the bottom carefully filled up. Then they can be left where they were put until the foliage has died down. The main point to remember is to keep them constantly supplied with water. It is a good thing, too, to leave the supports for the foliage in the pots. The leaves are naturally weak, and they are benefited by being kept as upright as possible. JOSEPH JACOB.

THE EDITOR'S TABLE.

Chinese Primulas from Stourbridge.—Messrs. E. Webb and Sons, The Royal Seed Establishment, Wordsley, Stourbridge, send us flowers of their strain of Chinese Primulas, and these are of exceptionally high quality. In addition to the individual blooms being large and of superb form, they are of extra good substance, and the many charming colours render them particularly valuable for the conservatory and dwelling-house at this season. Among those sent we were particularly pleased with *Rose Queen*, *Eclipse* (a charming shade of purple crimson), *Ruby Queen*, *Avalanche* (white), *Meteor* (salmon rose) and *Blue Bell* (a most pleasing shade of blue). Messrs. Webb have devoted many years to the improvement of the Chinese Primula, and their strain is now, we think, one of the best in the country.

New Freesias from Haarlem.—Mr. C. G. Van Tubergen, jun., Zwanenburg, Haarlem, sends flowers of his beautiful new Freesias. We have on previous occasions referred to the beauty of these flowers and the wide colour range they cover, and the examples sent to us now are even more beautiful. These include *Conquest*, a lovely shade of rose purple; *Robinetta*, nearly blood red; *Fraicheur*, very soft rose; *Gem*, pale lilac and cream; *Heliotrope*, dark heliotrope; and

Gold Mine, very rich golden yellow. In addition to their exquisite colours the flowers are of good size, and equally as fragrant as the well-known *refracta*.

Carnation Wivelsfeld Wonder.—Messrs. Allwood Brothers, The Nurseries, Hayward's Heath, send us flowers of this new Carnation. It belongs to the Perpetual-flowering section, and the beautiful flowers are white, daintily flaked with carmine. The calyx is sound and good, and the stem strong and of splendid length. Unlike many Carnations of recent introduction, *Wivelsfeld Wonder* is deliciously fragrant; hence it is a desirable variety for growing where scented Carnations are appreciated.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

ANEMONE (Z. M.).—The Anemone is one of the pink-flowered varieties of the *Poppy Anemone*, the *Anemones de Caen*, for example, that are so largely sent to England in the early months of the year. These Anemones are quite good and reliable in light soils; but in heavy soils, or those retentive of much moisture, they rarely succeed. The tubers are sometimes planted in the spring to flower in summer. The idea has never become popular, because of the wealth of beauty and variety other plants afford at that season.

DAFFODIL BULBS GONE WRONG (Mrs. S.).—The *Daffodils* were probably damaged before they were planted in the autumn. A good many bulbs suffered from exposure to the heat of last summer, and others were apparently from the same conditions attacked by the fungus *Fusarium bulbigenum*. Decay has proceeded so far in the bulbs sent that it is not now possible to say exactly what was the actual cause of the damage in the first instance. It has certainly been assisted since by *elworsius*, *sprinktails*, bacteria and saprophytic fungi; but, so far as we are able to see, neither of these was the first cause. It was evidently also nothing to do with the cultivation they received.

ROSE GARDEN.

ROSE CELESTIAL (P. W. T.).—This Rose is found among the group *Rosa alba*. It is grown by a few Rose-growers. Try Messrs. W. Paul and Son, Waltham Cross. When you say it was always in bloom, you cannot mean continuously, for it only blooms in summer, and is not an autumnal bloomer.

PRUNING OF OLDER ROSES AFTER TRANSPLANTING (A. H. P.).—It would never do to prune such plants as severely as is recommended in the case of newly-planted young ones. The best plan to adopt where the plants have three or four old growths is to cut one or two of these down to the ground level, then prune last year's growths that spring from the two old growths remaining. If you cut back old growths, it is too severe a strain on the vitality, and they would remain in a sort of "sulky" condition for some time; but by doing as recommended, you may, and probably will, obtain new growth from the base. The next year cut back another old growth, and again the next year, when you will have got the plant into a more healthy state with plenty of young wood. The lower you cut the old wood the better it will be in the future, as you will have young wood, which, in its turn, may be cut back hard. In the case of Tea Roses and some Hybrid Teas, they are so very excitable that if you cut all old growths back hard you would, no doubt, obtain some new growths towards the autumn; but we do not advise this plan. Wherever the old wood is pliable enough, bend the growths as low down as you can without snapping them, then secure them to a peg in the ground

Such a plan will encourage a fine lot of new basal growths, which will eventually yield the best Roses. Where the plants have only one growth, you must prune the last year's wood in that growth, cutting it back to within about four inches or five inches of its base, or, in other words, where it starts from the old growth.

WICHURAIANA ROSES WITH DEAD GROWTHS (A. H. S. S.).—We should say that the drought of last summer is the cause of the growths going wrong. Of course, it may be that the insecticides used were too strong, but we should say our first surmise is the correct one. Roses upon banks, no doubt, suffered a great deal; in fact, the wonder is they kept alive, because one cannot water effectually when Roses are planted on a slope. The best plan will be to cut out such growths, and as they are so vigorous, they will soon make amends for it.

PRUNING VARIOUS ROSES (L. A. H.).—The variety *Juliet* you must not prune too severely. The plant having growths about seventeen inches long should have these reduced to about twelve inches or even fifteen inches. The other Roses, all of which were planted in October, must be pruned severely this season about the end of March. Next year you can adopt a more moderate system of pruning. Nos. 2, 21, 34 and 35 cut back to about eighteen inches from the ground, and all the other bushes to within 3 inches or 4 inches of the ground. The standards should have their growths shortened to about three inches, or four inches, taking care in all cases, both for dwarfs and standards, to cut to an eye looking outward.

ROSE BLOOMS FAILING TO EXPAND (R. M.).—The Rose sent appears to be one of those very hard openers that are not worth growing. Certainly it should have greater heat. A variety like this requires a strong temperature; then perhaps you would get it to unfold. You could hardly expect it to do much this spring after having shaken it well out last December. Perhaps when its roots have laid hold of the soil it will open better. Why not bud another good sort upon it? You could do this next month very well. Insert buds in a number of growths made this year; then in autumn cut away all the growths up to the buds and remove any not budded. A good sort to rebud the plant with would be *Lady Roberts*, as this Rose does well under cool treatment. You could obtain buds by purchasing now young growing plants in 5-inch pots.

BASIC SLAG AND OTHER FERTILISERS FOR ROSES (W. E. T.).—Basic slag is a cheap and efficient manure, and should be largely used in gardens when ground is being trenched; but it is very slow in action, and should be applied in early winter to obtain the effect next season. We do not consider you need apply any further fertiliser just now to your newly-planted Roses. You say you gave them some bone-meal as well as the basic slag. Later on, say, the end of May, you could give them some weak liquid manure made from cow-manure and soot, varied, if you can get it, by sheep-manure, a most excellent article. It is a great mistake to give newly-planted Roses too much manure. If this is put into the soil, they are compelled to take it, and serious damage to the young shoots often follows. If you do not care to take the trouble of applying the liquid manure, put a supply of cow-manure around each plant at the end of May, when the rains will carry down the nourishment, or you could apply the liquid over it. In this case it is best to slightly remove the soil around the plant, put in the manure, and then cover it with soil. Next season, the plants being established, you would do well to give them a dressing of *Tonk's* manure in February in addition to some farmyard manure, which should be forked just beneath the surface soil in November. *Tonk's* manure is made as follows: Superphosphate of lime, twelve parts; nitrate of potash, ten parts; sulphate of magnesia, two parts; sulphate of iron, one part; and sulphate of lime, eight parts. Apply at the rate of 4oz. to the square yard in February. In the case of established Roses having received basic slag in the autumn, we should advise a good dressing now of farmyard manure, and see that it is dug beneath the soil at once. If unable to obtain such manure, a dressing of *Wakeley's* Hop Manure may be given.

FRUIT GARDEN.

CHERRY TREE ON WALL (Geo. H. P.).—You say your tree is very healthy in every way. That being the case, we do not think it is necessary to add much stimulating manure to its roots. The best thing for you to do in the first place is to give the tree a good soaking of manure-water now. That from the stable or cowyard in a slightly-diluted form is the best, and then in a week's time give it a similar watering with lime-water. To prepare the lime-water, place two pecks of fresh lime in an eighteen-gallon cask, tub or some other vessel, and then fill with water, thoroughly churning the lime and well mixing with the water. Let it stand twenty-four hours until it is clear; then pour the clear water into another vessel and water the tree with this only, digging the sediment into the soil of the garden. As soon as the soil has again become fairly dry, spread some bone-meal and lime thinly over the surface of the soil, fork it into the soil 4 inches deep, and then place a mulch of partly-decayed manure, 3 inches deep, over the surface of the soil as far as the roots extend. If you keep bees, place a hive near the tree while it is in bloom. If you do not, tie a rabbit's tail to a stick and draw this gently over the blooms every sunny day about noon until the flowers are ready to fall. This helps to bring the pollen in contact with the stigma of the flower (embryo fruit), without which contact fertilisation cannot take place. We hope this treatment will be the means of securing you a full crop of fruit.

THE GARDEN.

No. 2106.—VOL. LXXVI.

MARCH 30, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The Deciduous Cypress.—In the gardens at Syon House, Brentford, are to be seen some of the finest specimens of *Taxodium distichum* in cultivation. There are about a dozen trees, the finest being planted in damp soil near the lake. According to the catalogue of the trees and shrubs of these gardens, compiled by A. Bruce Jackson in 1910, the measurements of the finest tree are 111 feet by 12 feet, and this is probably the tallest *Taxodium* in Europe.

A New Hybrid Forsythia.—Among the several species and varieties of *Forsythia* flowering at the present time, *F. spectabilis*, a hybrid of Continental origin, is prominent. It is one of the forms of *F. intermedia*, which is a hybrid between *F. suspensa* (Fortunei) and *F. viridissima*. There are at least two other somewhat similar forms—*F. densiflora* and *F. vitellina*. *F. spectabilis*, however, is a golden yellow, quite the richest coloured of all the Forsythias. The flowers are large and very freely produced on the branches.

Saxifraga apiculata.—This free-flowering Saxifrage is rendering a good account of itself this season. Not only is it a capital plant for the rock garden, but it is one of the best Saxifrages for carpeting beds where taller plants are grown. It is singular that the origin of so valuable a plant should be shrouded in mystery. It is generally regarded as a garden hybrid, and *S. sancta* is credited with being one of its parents. In "Nicholson's Dictionary of Gardening" it is given as a native of the Pyrenees. The fact that it does not produce fertile seeds points to hybridism.

The Mediterranean Heath.—This is a delightful Heath to plant freely in the warmer parts of the country. Being a native of the south-west of France and Spain, *Erica mediterranea* is not hardy in all parts of the country, though in the London district, further South and on the West Coast the plants are very rarely seriously injured by frosts. The flowering season extends from March to May inclusive. During this time the bushes, 3 feet to 5 feet or more in height, are laden with the small reddish mauve blossoms. Two notable characters of the flowers are the prominent dark anthers and the delightful fragrance. There is also a white variety.

A Rose-Coloured Pasque-Flower.—One of the most interesting hardy plants shown at the Royal Horticultural Society's exhibition on the 19th inst. was a rose pink flowered variety of the Pasque-flower, *Anemone Pulsatilla*. This plant is naturally variable, but hitherto its variations in colour have been confined to shades of blue and white. The new-comer bore the rather cumbersome name of *Anemone Pulsatilla rosea* Mrs. Vanderelst. It is practically identical with

the type so far as habit and silkiness of foliage and flowers are concerned, but the colour of the blossoms is, as already stated, a most pleasing shade of soft rose pink. We understand that it originated as a sport, but will now come almost, if not quite, true from seeds. This new *Anemone* was shown by the Tottenham Nurseries, Limited.

Hyacinth Winter Cheer.—One of the most charming Hyacinths that we have ever seen is flowering with us now on a north border. It belongs to the miniature or small-flowered section, and is named Winter Cheer. Even in the bud stage it is beautiful, the half-opened spikes being of a lovely terra-cotta hue. When open the colour is glowing rose pink, quite unlike other shades of this colour that we have seen in Hyacinths. The Rev. J. Jacob, who kindly brought this variety to our notice at planting-time last year, speaks very highly of it for growing in pots. These miniature Hyacinths, of which there are a number, are much more graceful and pleasing than those with larger spikes, such as are generally used for bedding.

Anemone apennina in Grass.—Lovers of spring flowers who are taking note at this season of the plants they will provide for next year should endeavour to see masses of the lovely Apennine Windflower in the grass. Kew presents many superb studies of such kinds of planting, not only with Anemones, but with other subjects, and there are some other places in the United Kingdom where the Apennine Anemone is cultivated in myriads in the grass. The fact that it will thrive under trees is a high recommendation, and we know an orchard which is a sea of blue underneath the fruit trees in spring, and where this wonderful effect is supplied by *Anemone apennina* from year to year, ever increasing in extent and in beauty.

A Pretty Spring Effect.—An effective group may be made by combining *Magnolia stellata* and *Muscari conicum* in a mass or bed near the outskirts of a lawn, for the glistening white flowers of the *Magnolia* appear simultaneously with the rich blue flowers of the *Muscari*, the whole effect being aided by the green setting of the surrounding grass. *Magnolia stellata* is a Japanese shrub which has long been in cultivation, though it is only within the last twenty years that it has become really well known. It is customary to think of it as a bush 4 feet or 5 feet high and as far through, although it grows much larger when planted under very favourable conditions: in fact, a bush growing in the gardens at Abbotsbury Castle, Dorsetshire, was noted a few years ago to be nearly twelve feet high, with a somewhat similar diameter. Few shrubs blossom more freely, but, unfortunately, when planted in exposed positions the flowers are injured by a night's frost during late March or early April.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Two Pretty Rockery Plants.—*Soldanella alpina* is a dainty little plant which likes moist surroundings, but not stagnation. Its flowers are like small fairy bells, and are of a purple hue and exquisitely fringed. The flowers of the somewhat rare *Schizocodon soldanelloides* resemble the above. A plant is a tuft of shiny leaves and of creeping habit. It must have a moist position.—C. T.

Crocus vernus Leedsii.—This bright little *Crocus* is at present giving its fine, though not large, flowers in plenty. It is of a deep blue, with a white edge, and looks most attractive, though in point of size it is inferior to the better-known Dutch variety, *Ne Plus Ultra*, which is after the same colouring, but is much more refined and attractive. It is one of the prettiest of the small-flowered varieties of *C. vernus*, such as *Petro Polowsky*, *leucorhynchus* and *George Maw*.—S. A.

Saxifraga burseriana major.—I look upon this variety as one of the gems of its race, invaluable and certainly unsurpassed at this early season of the year. I do not say that it is the largest flowered of the *burseriana* forms; probably both *magna* and *Gloria* exceed it in size alone, though these cannot surpass or even equal it in its lustrous crystallised whiteness. Its obscurely-crippled flowers have slightly-waved margins, the result being, in conjunction with greyish, glaucous tufts of spiny leaves, a plant of sterling worth 2 inches in height that dares to face the vicissitudes of the Februaries we know so well. Its beauty, however, demands for it a covering at that time.—E. H. J.

A Pleasing Combination.—On page 130, March 9 issue, the Editor invites readers to note any pleasing plant combinations that have come under their notice. Some of the most pleasing are often the result of an accident, rather than the part of a studied scheme. An instance of this occurred in my garden last summer in the shape of a pretty little picture which was admired by everyone. It arose in this way: A large clump of *Chrysanthemum Mrs. Lowthian Bell* flowered for a long time most profusely. Close by a seedling *Petunia* cropped up, a poor, small-flowered thing of a loose, sprawling habit of growth, but with bright rose pink blossoms of a very pretty shade. The branches of the *Petunia* straggled through the *Chrysanthemum* in all directions, and the combination of the two formed a pleasing and totally unstudied effect. What is more, its beauty extended over a lengthened period.—P. H.

Fruit Prospects in Hampshire.—It is not often that good crops of Apples and Pears are obtained two years consecutively, and as we had very fine crops, especially of Apples, last year, one did not look for a similarly good harvest in 1912. Judging, however, from the show of blossom, the prospects are good. Pears are forward. Apple blossom is, in many cases, well surrounded by young, unfolding leaves, and I have noticed that where this is the prevailing feature, the fruits generally set freely. Where there are large clusters of blossoms and few leaves, and those rather stunted, the "set" is a poor one. This does not always happen, but very often. Plums, Cherries, Apricots, Peaches and Nectarines on open walls, and bush fruits also, give good promise. As the weather is so very changeable, we may experience late frosts, and, if so,

every effort should be made to keep the flowers and young fruits dry and protected where possible.—B.

Single-Flowered Camellias.—There has of late been a decided revival in the case of the *Camellia*, but largely owing, I should say, to the increased attention given to the single or semi-double flowered forms. Some delightful and representative groups have been during the present season contributed to the meetings of the Royal Horticultural Society by Messrs. William Paul and Sons of Waltham Cross. From the remarks of the numerous visitors it is easy to see that the single-flowered forms are far more admired than the double ones. This is not to be wondered at, as these single flowers are exceedingly beautiful, their ornamental qualities being in many instances enhanced by the conspicuous yellow stamens. Of the several varieties shown at different times, the following are particularly striking: *Alba simplex*, pure white; *Apollo*, red; *Juno*, white, sometimes flaked pink; *Jupiter*, rosy red, very large; *Mercury*, rich crimson, equal in size to the preceding; *Lady M'Kinnon*, crimson, marbled white; *Minerva*, rose; *Snowflake*, pure white; and *Waltham Glory*, deep red, very fine.—H. P.

Bitter-Pit in Apples.—Mr. McAlpine, page 119, March 9 issue, raises an interesting point in his note concerning Bitter-Pit in Australia and his suggestion that rain and heat are both factors in producing the troublesome disease known as bitter-pit. We are so used to alternating sunshine and showers in England that every year brings such weather during the ripening period, and yet rarely is the trouble so prevalent as during the past season in the South of England. It is probably always found to a small extent in very soft-fleshed Apples, but is rarely seen in Scotland and the North of England, and last season was rare in that district, though not altogether absent, while the rainfall was heavier and the heat less intense than in the South, where even hard-fleshed fruit showed the trouble to a marked extent. As the critical period is mainly in August and September, a comparison of the temperature and rainfall in those months over the past four years in a garden where the trouble was somewhat marked this year for the first time (on a light and porous soil) may be of interest to Mr. McAlpine:

| | 1908 | | 1909 | |
|---------------------------------|---------|------|----------|------|
| | Aug. | Sep. | Aug. | Sep. |
| Mean temperature (degrees) .. | 59.9 | 56.0 | 61.5 | 54.5 |
| Highest in screen .. | 81.2 | 77.2 | 86.0 | 70.0 |
| Lowest in screen .. | 41.0 | 36.3 | 44.0 | 37.0 |
| Mean soil tem., 1 ft. .. | 61.8 | 56.2 | 62.3 | 56.6 |
| " " 2 " .. | 62.5 | 57.6 | 62.8 | 58.1 |
| " " 4 " .. | 60.7 | 57.4 | 59.7 | 57.6 |
| Rainfall (inches) .. | 3.18 | 1.29 | 2.16 | 3.42 |
| No. of days of rain .. | 14 | 13 | 13 | 20 |
| Total rain, May to September .. | 9.78in. | | 13.64in. | |
| | 1910 | | 1911 | |
| | Aug. | Sep. | Aug. | Sep. |
| Mean temperature (degrees) .. | 61.3 | 55.7 | 67.1 | 59.1 |
| Highest in screen .. | 76.2 | 74.4 | 96.2 | 91.0 |
| Lowest in screen .. | 47.3 | 54.4 | 43.2 | 35.4 |
| Mean soil tem., 1 ft. .. | 61.5 | 57.1 | 67.7 | 60.3 |
| " " 2 " .. | 60.9 | 57.3 | 66.6 | 61.3 |
| " " 4 " .. | 59.5 | 57.7 | 64.2 | 61.6 |
| Rainfall (inches) .. | 2.16 | 0.60 | 0.62 | 1.01 |
| No. of days of rain .. | 15 | 4 | 6 | 9 |
| Total rain, May to September .. | 8.9in. | | 5.73in. | |

The precise cause of the trouble is still a matter of conjecture—whether heat, heat and drought, or alternations of sun and shower—and only direct experiment can hope to solve the problem.—SCIENTIST.

Calceolaria Burbidgei.—This useful and pretty winter and autumn flowering *Calceolaria*, which is a hybrid between *C. fuchsifolia* and *C. Pavonii*, has proved a boon to the many who require to

keep their conservatories gay in winter. It blooms for months at a stretch, and I saw some nice plants in an old Scottish garden the other day. They were very well grown, healthy and vigorous, and late in the season though it was, had a number of flowers upon them. Cuttings are generally struck at this season for flowering next winter, as was indicated by Mr. R. P. Brotherston in *THE GARDEN* for March 2.—A. M. D.

Hop Manure.—"A. D." in your issue of March 2, page 103, asks a few pertinent questions with regard to the above. His first query is, "What is the experience of amateurs who may have used it?" I have, I think, used it regularly for the last four or five years. I remember I bought it in the first instance to use as a mulch, with the hope that it would enable me to keep the soil of my Rose-beds as moist as possible under somewhat adverse conditions of exposure to wind and sun. I found it answered admirably, and when the sun had taken the moisture out of it, it mixed readily with the soil and did not in any way prevent the free use of the hoe (the secret of all successful gardening), as manure with much straw it does. It has the additional advantages (1) that it is not unsightly, (2) has no unpleasant smell, and (3) is easily and cleanly applied. It has some manurial value. What the actual percentage may be I do not know, but it undoubtedly has a marked beneficial effect on all plants on which I have used it. Personally, to the great body of amateurs I think I should find it difficult to recommend another manure with greater confidence. With it they run no risk of overfeeding their plants, and, as far as I can judge, it fairly fulfils all that Messrs. Wakeley claim for it. The answer to "A. D.'s" other questions is in the affirmative.—H. E. MOLYNEUX.

Summer - Bedding Flower - Schemes.—When plants that are somewhat fugitive in their flowering are employed for this purpose, it is needful that there should be in the nursery garden some others, either of the same or diverse blend, to put out for quick succession. Mr. C. Turner's arrangement of pink Sweet Williams as a base, with Canterbury Bells growing out of them, mentioned on page 130 of March 16 issue, has the weakness that neither are of long endurance. Few plants give us bloom over so long a period as *Violas*, and as these are of many colours it is quite easy to find in Snapdragons, Pentstemons, Larkspurs or branching Stocks top plants which can harmonise with the carpet hue. Of hardy annuals, very pretty effects may be got from a carpet of blue *Nemophila* or of the deeper blue *Phacelia*, with, for top plants, branching pale blue Larkspurs; or a carpet of *Bartonia aurea*, with annual *Coreopsis*; or a base of a dwarf double rose *Clarkia*, with the deep rich red *Firefly* standing out of it; or of *Nigella Miss Jekyll*, with dark tall Larkspurs. Among those a very enduring arrangement would be one of dwarf white *Antirrhinum* for the base, associated with tall varieties of rich rose or carmine. All the same, in bedding with plants of this nature, to secure colour arrangements it is important that there should always be coming on plants of *Asters*, *Stocks*, *Phlox Drummondii*, *Snapdragons*, *Pentstemons*, *Pansies* and, indeed, anything which would bloom well into the autumn, and thus maintain a long succession of flowers. It would be interesting to get from readers their judgments as to what two plants combined in a bed would give the longest enduring show of bloom that should be harmonious as well as enduring.—A. D.



1.—FRUIT TREE GROWING IN CULTIVATED SOIL.

Rhododendron præcox.—The delightful *Rhododendron præcox* is apparently enjoying the mild spring we have been experiencing, and rarely have I seen it so full of flower or escaping so well from the late frosts, which, in some seasons, reduce the beautiful peach-coloured flowers to wrecks in one night when the shrubs are unprotected from the frost should danger be apprehended. We have no early shrub which appears to gain such universal admiration as *Rhododendron præcox* in late February or early March, and everyone who visits a garden where it flowers well is delighted with the plant. Its leafless branches only seem to set off the better the quantity of flowers it gives, and these are of such charming colouring that the term of "peach" applied to it seems too faint to describe the exquisite colouring. It is quite hardy in itself, but it is the flowers alone which suffer from frost, and a little nightly protection is all that is required for the prolonged enjoyment of their beauties.—FRUTICOSA.

Bamboos for House Decoration.—Readers of THE GARDEN who make a point of having Palms, Dracænas and similar plants in their dwelling-houses for decorative purposes would do well to note carefully the reference made to the above-named plants, Bamboos, on page 117 of the issue for March 9. Living in a district where much hall and room decoration is carried out, both at private and public functions, I can testify to the great usefulness of Bamboos in conjunction with Palms and other plants. I would like to give one word of warning about their treatment. In

many instances the plants are allowed to suffer from want of water at the roots, with the result that the tips of the leaves turn brown and become an eyesore. The plants certainly look better in ornamental tubs than in boxes, but it is not a wise plan to actually grow the plants in the tubs. They should be grown in pots, and the latter placed inside the tubs after they are prepared for the dwelling-house, corridor or hall.—B.

Saxifraga burseriana Gloria.—This was at once the idol and the pride of all alpine enthusiasts as seen in Mr. Clarence Elliott's group at the Royal Horticultural Society's meeting on the 5th inst., the two or three dozen plants, loaded as they were with flowers of the size of a shilling, being a revelation to all. When Mr. Farrer originally exhibited this notable variety, everybody was struck with the large flowers then shown, though no one, I imagine, was prepared to see the great improvement—the marked increase of size—as revealed on the occasion referred to. I look upon *Gloria* as by far the largest-flowered of the *burseriana* group, and a plant difficult to beat for freedom, just as I look upon the best type of *S. b. major* as the most chaste, glistening and pure of them all. *Gloria* might win by size alone, perhaps, though it could never displace the glistening purity of *major*, a fragrant kind and an aristocrat to boot. *Gloria*, however, is a great flower, and where size tells, as it does invariably, no lover of alpinists, to use a catch phrase, "will be happy till he's got it." Mr. Elliott is to be congratulated on a great cultural success.—E. H. JENKINS.

Apple Trees in Grassland.—The differences shown in the accompanying illustrations of the growth between trees planted in grass and arable land respectively are very striking. Fig. 1 represents one of a number of trees planted in tilled land and grown therein from the beginning. Potatoes and various other crops having been grown beneath their branches for ten years in succession. Fig. 2 is from a plot planted at the same time, in the autumn, as Fig. 1. The soil in which the trees were planted was sown with grass the following spring, the result being that they grew but little and began to show unmistakable signs of partial starvation. We cleared a circle around the stems and manured it, but this made very little difference to the health of the trees. Eventually, after the grass had grown for six years, we dug it up, well manured the soil and planted it with Cabbages. Last year a crop of Mangolds was harvested from this plot. The result from the treatment was satisfactory, and I am glad to see a very marked improvement in the trees generally. It is a great mistake to grass down young Apple trees, and especially in poor, sandy soil. There are plenty of instances such as ours in various places. Keep the trees clean for a number of years, and then grass them down if thought desirable.—W. D. POPE, *The Lodge, King Barrow, Wareham*. [Experiments conducted at the Duke of Bedford's Fruit Farm at Woburn have proved that trees of practically all kinds thrive much better in cultivated soil than in grassland.—En.]

FORTHCOMING EVENTS.

April 2.—Royal Horticultural Society's Meeting and Exhibition. Lecture at 3 p.m. by Mr. R. Irwin Lynch on "Tender Plants for a Warm Corner." Scottish Horticultural Association Meeting.

April 4.—Manchester Orchid Society's Meeting.

April 6.—Société Française d'Horticulture de Londres Meeting.

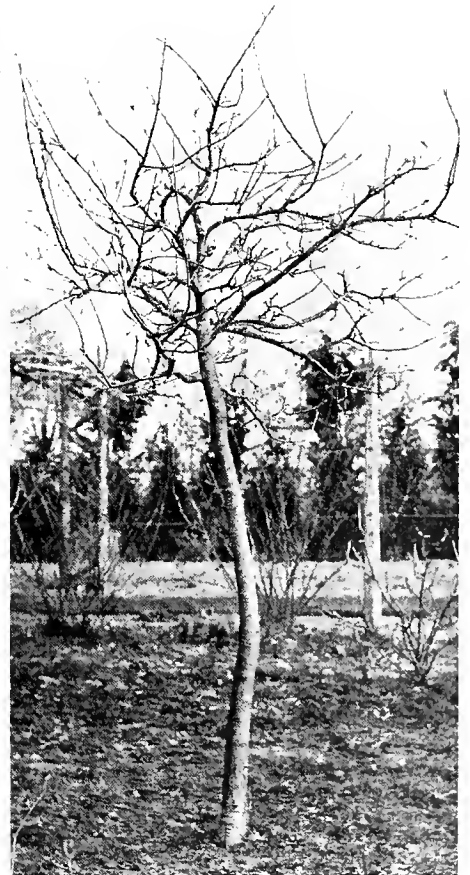
THE ROSE GARDEN.

ROSES FOR CUT BLOOMS.

Baskets of Roses.—The excellent idea started by the President of the National Rose Society of offering a prize for Roses shown in baskets has undoubtedly "caught on," and we are likely to see these pretty exhibits in greater force this coming season. This style of exhibiting is particularly helpful to all who wish to gain knowledge as to the more suitable varieties for home decoration, and it also portrays at a glance what may be accomplished by employing the various sorts for bedding and massing, because one may see the Roses practically as cut from the plant without the artificial aid of wires, which becomes necessary when such Roses are exhibited in bunches.

A Warning Note.—The time is now drawing near when we shall see many varieties exhibited at the spring shows, varieties that undoubtedly are good for growing under glass; but one must be careful to see them growing outdoors before being led to plant for garden decoration. So many Roses will make grand long stems under artificial conditions, while under natural conditions they would be a comparative failure.

For House Decoration we want Roses of good staying power, decided colour, and also fragrance. It is because they possess these good qualities



2.—FRUIT TREE PLANTED AT THE SAME TIME AS FIG. 1, BUT GROWN IN GRASSLAND.

that Mme. Abel Chatenay, Liberty, Richmond, La France and Killarney, are welcomed, and they should be grown in quantity for this purpose. So also should Lyon Rose, but it is of such a unique colour that it must be very carefully placed, or its beauty is not made the most of. Very effective combinations were achieved last season with Lyon Rose and Irish Elegance, and this blending would be difficult to surpass.

If Messrs. A. Dickson and Sons are sending out the rival, and perhaps improved, Irish Elegance which they have named Firebrand, and another gem, Queen Mary, then decorators will welcome these most gratefully. Firebrand is really a richer coppery colour than Irish Elegance.

There is a very charming Rose, Gottfried Keller, that must sooner or later be largely grown for decorative work. It is a real gem and a very continuous bloomer, a sort of glorified Lady

orange buds of Canarienvogel will be in much request for blending, perhaps with Irish Elegance.

I should like to see prizes offered by the National Rose Society or the Royal Horticultural Society for tables of Polyantha Roses. I am convinced they are not grown nearly so much as their merits deserve, and they are likely to be greatly improved. A golden Orleans Rose with trusses as huge as this fine novelty would be a real gain. P.

SEASONABLE WORK AMONG THE ROSES.

THERE is considerable work to be done in the Rose garden at present besides the most important task of pruning. In the first place, it is by no means too late to plant, but the work should be done as expeditiously as possible when the plants are received from the nursery. I would prefer to prune late-planted Roses quite

in this connection, rather than the neat structures too often found, which so quickly come to grief.

Much more thinning might be practised with advantage upon pergolas, arches and arbours than is generally done. Any blanks among climbers can be filled with plants from pots, which will afford a display the same season if turned out of the pots and planted with care.

Roses Under Glass.—This is also a very busy time with our Roses under glass, as they should now be in full growth, if not already in bloom. The application of liquid manures is important, but many err through using these much too strong, often to the extent of crippling the young roots, and thus doing more harm than good. I have found a mixture of animal manures and soot, placed in a tub or tank of water, produce an excellent liquid stimulant for Roses. We cannot all procure the drainings from a yard or even a cow-stall, and if the soot

be placed in an old sack or bag, the objectionable scum is avoided. No doubt the ammonia arising from the animal manures is of benefit to the Rose foliage, but in some cases one has to avoid this. In such an instance, guano water, at the rate of 2oz. to the gallon, may be used with advantage. But what is even cheaper, and almost as good, may be made from soot, using the water (unstirred) a little darker in colour than sherry. Where only a few plants are grown, the soot may be put into an old stocking and hung so as to rest in the tub of water.

Mildew and insects must be warred against directly they put in an appearance. In fact, one cannot well take too prompt measures as regards fighting these foes. The different methods of eradicating these have frequently been explained in these columns. A. P.

ROCK AND WATER GARDEN.

HARDY CYCLAMEN AND THEIR CULTIVATION.

ALTHOUGH the various species of Cyclamen add such a charm to our gardens, often in the dullest part of the year, they do not seem to be grown to the extent their beauty justifies. Indeed, it is surprising what a number of amateur gardeners one meets who are astonished to learn that there are a large number of these pretty little plants which are quite hardy.

By careful selection one can have these hardy Cyclamen in flower during a number of months in the year, as some species are spring flowering, others late summer, and, yet again, some come into blossom during September and October. As a whole, the plants require one or two years in any given spot to make themselves at home, and it is usually not until after this interval that they flower really profusely. Perhaps this factor may account for their not being appreciated by many gardeners.

The position they require is a thoroughly well-drained one, and preferably in shade or half shade. They thrive amazingly at the base of large trees—often a position which is somewhat difficult to



A BEAUTIFUL HARDY CYCLAMEN: C. COUM ALBUM.

Penzance, with a few more petals than that charming variety. Although of such a peculiar growth, I am convinced that Château de Clos Vougeot will soon be largely grown outdoors for decorative work. It is a wonderful colour, almost black, a colour that attracts everyone, and its fragrance is delicious. Mrs. Alfred Tate is the embodiment of elegance and beauty of bud, an ideal variety for table decoration. Of the newer Rambler Roses, one of the most beautiful, from a decorator's point of view, is Ethel, a variety of the wichuraiana class, raised by Mr. C. Turner. It is to be hoped he is sending this out this season. For novelty of colouring I am not sure but that the so-called Blue Rose will not find many admirers. It would need careful blending, perhaps with foliage of Rosa rubrifolia, but I should say a table of this would find many admirers. Certainly Jessie will become an established favourite, both as a pot plant and for cutting; and the pretty little golden and

hard at the time of putting them in, certainly much harder than if the same Roses had been planted during the late autumn months. Cut back to quite sound wood, although I have found very few frost-affected growths so far. Plant firmly, and in the case of standards see that they are securely staked at once.

After pruning, the ground may be cleaned and slightly loosened before applying a mulch of well-rotted farmyard manure. It is from now onwards that the juices from this will be of most service to the Rose roots, and not when they are in a dormant condition.

Pergolas and arches should be strengthened if at all unsound. We do not want the annoyance of these collapsing just when the Roses are in full growth and beauty. It does not matter if coarse, rough pieces of wood are used to strengthen these. They will soon be hidden, and, indeed, I have a decided leaning to solid and rough-looking work

garnish—the half-dry soil about the boles of such trees seeming to suit them well. In the rock garden they seem to prefer somewhat secluded spots protected from violent winds, where the soil can be made up of good loam, leaf-mould and old mortar in about equal proportions, and added to this mixture an equal proportion of broken brick or stone chips. Such a compost is decidedly “open,” and I find in my district, which is notorious for its heavy clayey soil, that this medium is appreciated by them. It is by no means uncommon, especially with *C. neapolitanum* (often sold under the name of *C. hederæfolium*), for the freshly-planted tubers to throw no leaves for twelve months. This is disheartening to the novice, but the plants should not be despaired of, as they mostly come away in the orthodox fashion after this rest.

My experience suggests that a *Cyclamen* which is doing well should on no account be interfered with. A suitable position for them can be found in the alpine garden under dwarf shrubs, such a position suiting them admirably, and in a way utilising what would otherwise be waste space. Usually the first to delight us with its cheery blossoms, early in the New Year, is *C. Coum* and its variety *alba*. The former has flowers of a rich reddish purple, very intense at the mouth, while the latter is tinted with the most delicate flush of pink, and at its mouth a rich touch of the reddish purple, as in the type. The leaves are a rich bronzy green on the surface, the under sides being red. The illustration on page 156, gives some idea of this white variety; and although the plant shown is in its first season after planting, it has a fair number of flowers, though nothing to what I am anticipating in a year or two. Other species which are of equal value are *C. repandum*, flowering about April or May, pink to red in colour; *C. europæum*, flowering from July onwards, of a reddish purple tint; *C. neapolitanum*, also reddish, and its pure white form, *album*, a lovely plant, both flowering in September and October, and afterwards displaying somewhat Ivy-like leaves of a rich green, marbled with silver.

Woodford, Essex. REGINALD A. MALBY.

THE GREENHOUSE.

LILIES FOR GREENHOUSE AND GARDEN.

(Continued from page 147.)

Potting the Plants.—There are two methods of potting Lily bulbs in vogue, one of which consists of filling the pots to one-third of their depth with soil and placing a little soil around the bulb, or even none at all, and leaving it till signs of growth ensue. This, to my mind, is irrational and wrong, but many find it answers well. I prefer to cover the bulbs at the outset. By so doing the bulb will not be harmed by exposure, while growth will be stimulated into an earlier activity, and, the stem-roots penetrating the soil at once, will just as quickly benefit the plant. The best of the auratum set are the type and its varieties *platyphyllum* and *rubro-vittatum*. Pots of 6 inches to 8 inches diameter should be used.

Lilium speciosum and Its Varieties.—All the varieties of this group are great stem-rooters, though they differ in their larger size, more vigorous growth, and more voracious appetite. Hence their chief requirements would be larger pots and richer soil. For example, one big bulb would be sufficient for a pot of 8 inches diameter, though

three smaller bulbs might easily be accommodated in the same-sized pot. Where finer examples are desired, one cannot too strongly urge the value of these when grown in tubs or even large pots. In this way they are admirable for the greenhouse or covered verandah near the entrance, and, affording a profusion of flowers for some weeks, become a source of pleasure and pride to their owner. Moreover, they are only delicately or obscurely fragrant, hence are suited to decorative work in the sitting-room. The best varieties of this group are the white *Kratzeri* (a flower of spotless purity) and the crimson-flowered *rubrum*, *cruentum*, *magnificum* and *Melpomene*. These varieties, too, do exceedingly well in the garden, where they afford a successional flowering to those grown in the greenhouse.

L. longiflorum.—

There are many varieties of the white trumpet Lily, than which none is more chaste or desirable. Their fragrance, purity, and the ease with which they may be grown are among other good attributes. Moreover, they are dwarf-growing and cheap, hence of a greater value. Three moderately large bulbs can be accommodated in a pot of 6 inches diameter, and as each bulb will produce from two to four flowers, a good display is possible. None of the varieties of this group is difficult to grow, though under glass they are susceptible to green fly attacks, to prevent which the usual remedies should be employed. The best varieties are *longiflorum giganteum*, *l. eximium* and *l. Sakesima grandiflorum*, each in its way superb. The above-named sets are the best for pot culture. After potting, place them under the greenhouse stage or in a frame, and, provided the soil is moderately moist at the time, no water will be required for ten days or so.

For the Open Garden there are many good and suitable kinds that may be planted at the present time quite well. Prior to the planting, the ground should have been well and deeply cultivated and given the addition of leaf-soil, well-decomposed manure that is not of the “fat” order, and, if the soil be heavy or retentive, a further addition of sharp sand or grit. The bulbs should be buried about five inches deep. Those

of the *speciosum* group might be planted 7 inches deep or even more, provided always that a generous depth of soil remains below that level.

L. testaceum, or the Nankeen Lily, is certainly one of the best for spring planting, and one of the most effective when in flower. In good health it is a handsome sort, and attains to 6 feet high when established, a more usual height from spring plantings being 4 feet. It prefers a rather cool rooting medium and soil of firm texture.

L. tigrinum and its varieties are among the hardiest, showiest and cheapest. Need one say more to commend them to all lovers of the race?



PRIMULA MALACOIDES, A BEAUTIFUL AND GRACEFUL GREENHOUSE PLANT. (See page 158.)

So cheap are they by the dozen or hundred that they may be freely planted in beds, in border groups, in the shrubbery, or in woodland spots—anywhere, indeed, where effective gardening is desired at a minimum cost. The typical kind above-named and its varieties *splendens* and *giganteum* are all worthy of attention.

L. croceum (the Orange Lily) and the forms of *umbellatum* are at once the sturdiest and hardiest of this noble tribe. They are of a bushy nature, vigorous, erect-flowered and showy in red, crimson and allied shades. Moreover, they are quite

content with common garden soils and a little manure. In concluding an all too brief note on Lilies, one cannot forego the mention of *L. pardalinum* (the Panther Lily), which is so admirably suited to spongy or wet ground where a liberal depth of peat, leaf-mould and loam exists for its delectation and support. E. H. JENKINS.

A RARE GREENHOUSE LILY. (*LILIUM ROSEUM*.)

THIS rare Himalayan Lily is one of the most interesting plants of the genus. *Lilium roseum* and *L. Hookeri* (an allied species) in structure come midway between the genus *Fritillaria* and that of the *Lilium*; in fact, some botanists class both plants as *Fritillarias* under the names of *F. Hookeri* and *F. macrophylla* (*roseum*).

L. roseum was first collected by Thomson and Strachey, the last-named sending home seeds, which first flowered at Kew in 1853. The tallest spike on the plant illustrated is about one and a-half feet high, carrying twenty-four flowers. The leaves, closely arranged at the base of the stem, are 1 foot to 1½ feet long, and less than an inch in width. Higher up the stem the leaves are shorter and further apart, gradually merging into bracts near the flowers. The bell-shaped blossoms are a pleasing pale mauve tint, 1 inch to 1½ inches in length, and 1 inch broad at the mouth.

This Lily cannot be regarded as perfectly hardy, for, when grown outside, the protection of a warm south wall or sheltered nook in the rockery is necessary. A well-drained, light, sandy soil is the most suitable. It can be grown very successfully in a cold greenhouse or alpine house. The plant illustrated is growing in a pot. In Continental catalogues the subject of this note is more often listed as *Lilium* or *Fritillaria thomsonianum*, the name which is given in the *Botanical Magazine*, t. 4725. No mention of this Lily is made in the two popular books on Lilies, "The Book of the Lily," by W. Goldring, or "Lilies," by A. Grove, one of the series of "Present-Day Gardening." A. O.

PRIMULA MALACOIDES.

It is surprising to note how rapidly this graceful *Primula* has leapt into public favour. Although of recent introduction, it already finds a congenial home in amateurs' greenhouses in all parts of the country, and market-growers—the best judges of the public taste—are growing this delightful *Primula* in quantity as pot plants. Of light habit, free and easy of growth, it is invaluable for greenhouse decoration during the winter months. The flowers, of a pretty pale mauve, are produced tier upon tier to a height of about two feet. There is a pure white variety now in commerce known as *P. malacoides alba*. It is identical with the type except in colour.

COLOURED PLATE. PLATE 1448.

STAR-FLOWERED CINERARIAS.

THE term "Star-flowered" is used to designate a very beautiful section of these valuable greenhouse plants, which differ markedly from the old-fashioned type with their sturdy growth and massive flowers. Although the Star Cinerarias are of garden origin, their distinctive title is often erroneously Latinised into

they occupy a position undreamt of a couple of decades ago.

Messrs. Sutton and Sons of Reading have devoted a good deal of attention to the cultivation of the Star Cinerarias, with the result that they have improved out of all knowledge, till the term "Sutton's strain" has become a password for the very best. This can be readily understood by those who attend the meetings of the Royal Horticultural Society and the principal exhibitions during the season; indeed, Sutton's Cinerarias at the Temple Show are always a centre of admiration, the plants showing high cultural skill as well as a great variety of pleasing colours. The coloured plate presented with this issue represents a typical plant in Messrs. Sutton's collection.

It is especially in the colour of the flowers that the Star Cinerarias of the present day show such an advance on their predecessors, for in the older kinds flowers more or less of a magenta tint were very numerous among them; but now this objectionable colour has been to a great extent eliminated, its place being taken by white and delicate shades of blue and pink. Such great pains are taken in the selection of the seed that this section is now offered true to colour in white, light blue and yellow, as well as in mixture.

Besides this there is a strain in which the florets are rolled lengthwise, thus making them much narrower than would otherwise be the case. These are known as Cactus-flowered Star Cinerarias. The ordinary florists' varieties have also a section with blooms formed in the same way.

A comparatively new group of Cinerarias has been shown by Messrs. Sutton within the last two or three years under the name of Reading Gem. This section originated by the intercrossing of the Star Cineraria with the pretty loose-growing *Cineraria Heritieri* from Teneriffe. In Reading Gem the plants grow about a couple of feet high, and form large, loose heads of starry flowers of different shades. The foliage is small, and on the under side is intensely silvery. Messrs. Sutton offer seed of Reading Gem; but in the case of some of the *Heritieri* crosses it is necessary to increase them by means of cuttings.

Raising Seedlings.—

It is very essential that seed when purchased should be obtained from a reliable source, otherwise one may find a preponderance of the magenta shades, to which everyone nowadays most decidedly objects. As seeds of the best forms are valuable, their sowing should be carefully carried out and the after-treatment on a par therewith. The seeds should be sown in May and June in shallow boxes or pans. These receptacles must be clean, well drained, and filled to within an inch of the rim with a compost made up of equal parts of loam and leaf-mould, with a liberal mixture of silver sand. Before using,



LILIUM ROSEUM, A RARE GREENHOUSE SPECIES FROM THE HIMALAYA.

that of *Cineraria stellata*. Time was when all those plants that did not conform to a rigid standard set up by a few florists were discarded, and the selection of varieties proceeded on very even lines. After a while, however, the public taste set in towards decorative plants, of a lighter character and less formal in shape than those previously grown. As they quickly became popular, many raisers worked away on their own particular lines, and the members of this section were freely exhibited, so that they became everyone's flower, and to-day

this should be broken down finely. Then pass a portion of this prepared compost through a sieve with a quarter of an inch mesh, pressing it down moderately firm and making it quite level. On this sow the seeds, taking care that they are not overcrowded, as, if they are allowed sufficient space, the young plants will not need to be pricked off, but may be taken directly from the seed-pans and potted into small pots. When the seeds are sown, they must be lightly covered with some very fine soil, say, such as will pass through a sieve with an eighth of an inch mesh. Care must be taken not to bury the seeds too deeply, while it is also of equal importance to see that the watering is done by means of a very fine rose. In a gentle heat the seeds will soon germinate, and the young plants make rapid headway. They must soon have plenty of

air, and a good place for them during the summer will be in a frame under a north wall or in some similar position. A very important matter is to see that the plants are not allowed to get stunted and pot-bound before they are shifted into larger pots, as if this happens it is a difficult matter to induce them to grow freely afterwards. When growing they are greatly benefited by being bedewed with the syringe night and morning. Watering in all stages must be carefully done. Aphides may be kept in check by means of vaporising, and the little maggot which makes tunnels in the leaves should be killed by a nip directly the first traces are to be seen. If Auto Shreds are used for fumigating they will kill both aphides and leaf-mining maggot. Want of space has compelled me to limit my cultural remarks to a brief mention of two or three of the more important features, but if these are fully observed the cultivation of these beautiful greenhouse plants ought not to present any serious difficulties. H. P.

TREES AND SHRUBS.

THE HARDY BROOMS.

IT would be difficult indeed to find a more beautiful sight in early spring than a railway cutting the banks of which are clothed with golden masses of the common Broom (*Cytisus scoparius*), a plant that can fairly claim to be one of the most brilliant and hardy of all our natives. On commons and waste places generally where the soil is poor, this shrub will also be found, clusters of plants forming perfect sheaves of gold. Beautiful as this Broom is, there are, happily, many others of even more refined beauty available for growing in our gardens

and woodland. To those whose soil is of a poor, sandy character, these shrubs are indispensable, for it is in such soil that they luxuriate and give their blossoms in abundance; indeed, the Brooms will grow well where very little else in the way of shrubs can be induced to exist, and for this reason should be largely planted where the soil conditions are as described above.

Again, we find the various members of the family differing considerably not only in the colour of their flowers, but also in dimension and the forms they assume; hence one may fairly claim that there are kinds suitable for gardens of all sizes and for almost every position in the garden. The small, procumbent varieties are excellent for the rock garden, and even the larger types may be utilised there when a bold mass is desired.

these in pots, as there is then very little risk of loss. Planting may be done in late autumn or in early March, or April if from pots.

Among the taller-growing kinds, mention must be made of two varieties of our native Broom, viz., *Cytisus scoparius andreaus* and *C. s. sulphureus* the Moonlight Broom. The first has the same habit as the native plant, but instead of the blossoms being pure yellow, the wing petals are blotched with brownish crimson, this giving them a touch of beauty not easily described. *Sulphureus* has a slightly pendent habit, its large blossoms being pale sulphur colour. *Cytisus præcox*, which is about the earliest to bloom, has already been referred to. One of the most graceful is the white Spanish Broom, *Cytisus albus*. This forms a large bush 6 feet or more high, and is one that



A BANK OF *CYTISUS PRÆCOX*, ONE OF THE EARLY HARDY BROOMS.

It is essential in planting to form large or moderately large masses of one kind; solitary plants, in most instances, lose much of their beauty. At Kew and other places the system of planting large beds formed in the grass in the open parts of the woodland is successfully adopted. The illustration above shows one of the most beautiful of all the Brooms, *Cytisus præcox*, utilised for a unique purpose. At the back of the plants is a tall Yew hedge, in front of which is a bank in which the Broom is planted, its pendent stems, clothed with myriads of creamy white flowers, providing a feast of quiet, graceful beauty that would be worth going far to see.

To those about to plant these shrubs, however, it will be necessary to give a word of warning. Owing to the fact that they make very few roots, and these of a long, wire-like character, they transplant badly and only very young plants should be used. If possible, it is better to purchase

may be planted as an isolated specimen. *Cytisus biflorus* produces its rather small yellow flowers in pairs and grows about four feet high. It is not so showy as some, but is, notwithstanding, a very useful plant. A new hybrid of rare beauty is named *C. Dallimorei*, and is said to be the first artificially-raised hybrid known, its parents being *C. albus* and *C. scoparius andreaus*. In size the blossoms are midway between those of its parents, the colour being creamy white and rosy crimson.

The following varieties, owing to their dwarf and, in some instances, prostrate habits, are especially adapted for the rock garden or other positions where low-growing shrubs are required; *Cytisus kewensis*, creamy white; *C. Beanii*, golden yellow; *C. decumbens*, rich yellow, very dwarf; *C. leucanthus*, a rare plant of dwarf stature and clothed with creamy white blossoms; *C. purpureus*, rosy purple; and *C. versicolor*, similar to the preceding plant, except that the flowers are paler in colour. H.

THE FLOWER GARDEN.

SWEET PEA NOTES.

Autumn-Sown Plants.—There is a remarkable difference between the plants from seeds sown outdoors in the autumn in various gardens. I have seen hundreds in splendid condition, equal numbers that are little better than worthless, and many that are quite dead. This is, of course, due to the varying effects of the weather. On deep, warm soils the losses are scarcely appreciable, while on shallow, cold lands the trouble is irremediable. Progress in the autumn months was generally satisfactory, but the incessant wet of the winter, followed by frosts of exceptional severity in many districts, have played sad havoc, and staunch advocates of outdoor autumn sowing are now sadly discussing whether the system is everything that is good. Personally, I am a whole-hearted believer in it in deep, warm soils that are on the light side, but on strong clays I regard it with a big element of suspicion. Why those who are enthusiastic enough to sow in the autumn at all do not go to the little trouble required to provide adequate frame accommodation I can never understand. Perhaps they will strain a point and do so after their experience of the present season.

Indoor-Raised Plants.—It is now time that all plants raised from seeds sown under glass were put into their flowering quarters. Of course, the bulk of the planting will have been carried out a week or two back; but just as there are some people who cannot resist too early planting, there are others who cannot be induced to do it when the proper time arrives. All the conditions should be as nearly perfect as it is possible to get them, and the earlier the plants can secure an excellent hold of the soil, the better the prospects must be. It will not be long before the ground will be really too warm for a satisfactory start; hence immediate planting is urged upon growers.

Staking.—It is the excellent custom of many cultivators to stake either on one or both sides of the lines at the same time as the planting is done; but it is not always convenient to do this, and it cannot, in any circumstances, be regarded as an imperative necessity. If it could not be accomplished then, let it be put in hand forthwith. All who are able to do so still use the old-fashioned Hazel or other sticks, and there is no disputing that the plants like them, while it is equally certain that they are the most artistic supports that can be used. Notwithstanding the number of times it has been urged that the sticks must never fall inwards at the top, the mistake is still commonly made, with the inevitable result that the best support is not provided just where it is wanted. It is rather more difficult to stick with the tops

running slightly outwards than inwards, but it is infinitely the better system, and therefore should always be adopted. The height of the sticks from the ground will necessarily vary in practically all soils. In some gardens the plants only get up 5 feet or 6 feet, while in others they go up twice or even thrice as tall. In the early stages assistance is much appreciated by the plants. The shoot may not be going in exactly the correct direction, or, if it reaches the stick, it does not take kindly to it. In both instances a loose but secure ligature will put matters in proper order and encourage excellent progress. Where wire supports are used, the experience of many

be allowed between the seeds, while twiggly sticks should go to the youngsters before they attain to a height of 4 inches, as they can then never fall over.

HORACE J. WRIGHT.

PROPAGATING PHLOXES BY CUTTINGS.

THESE showy border flowers, varieties of the species *decussata*, are invaluable in a good herbaceous border, and by successional propagation may be flowered from July until late October, and will provide at the latter date feasts of colour not obtainable from any other plants. To secure strong, healthy stock propagation by cuttings is imperative. Many complaints are heard of diseased stock; the growth becomes curled, the foliage takes on a yellow appearance, and the flowers produced are miserable specimens and not worth the space occupied. The practice of dividing old clumps, often at a season when growth is dormant, is much to blame for this, as it is then impossible to distinguish the healthy from the unhealthy plants. This can be avoided by propagating from cuttings, carefully selecting healthy growths, and a start may now be made.

They root easily in a cold frame in a sandy compost. Care must be exercised in shading from sun for the first fortnight, and when they have commenced to root, gradually give more light and air, the main object being to secure sturdy little plants. Do not allow them to remain too long in the cutting-boxes, and when sufficiently rooted (generally within a month) plant out in a well-prepared position in the border or in well-prepared nursery quarters. Care must be taken to see they are not allowed to suffer from want of moisture at the time of planting.

These plants, after producing one splendid truss of bloom the first season, provide ideal plants for the herbaceous border the following year, and should not be allowed to remain in the border after the second year.

To obtain a succession of blooms a batch of cuttings should be inserted every three weeks until the end of May; these will give flowers until the end of October if not destroyed by severe frost. The great value of this method is that the stock is kept in a healthy, vigorous condition, and the increase in size

of pip and truss obtained from these young plants is an ample return for the labour incurred.

Phloxes require generous treatment to secure the best results, and a mulching of well-decayed manure early in June will carry them through the most severe drought, providing the ground has been deeply cultivated and well manured.

The above method is the one advocated by Mr. James Box of Lindfield, Sussex. Those who had the pleasure of seeing the beautiful exhibit of Phloxes staged by him in the Royal Horticultural Hall in October last year will realise the value of raising plants from cuttings as advised above.



THE NEW EARLY-FLOWERING DAFFODIL HELIOS. (See page 163.)

growers proves that help to start with is essential to success.

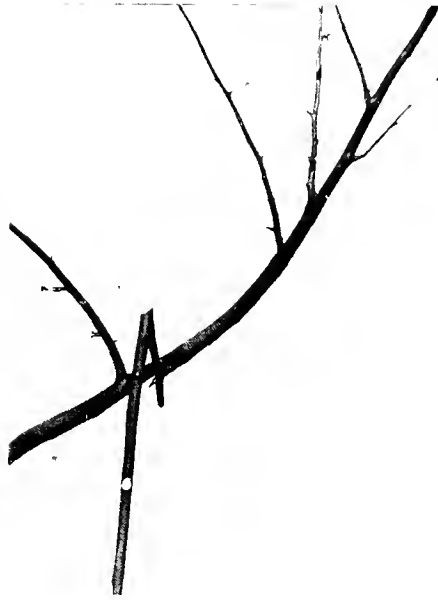
Sowing Seeds.—It is by no means too late in the South of England, and just about the best time in the colder districts, to sow seeds out of doors. I would again impress the vast importance of thorough soil preparation, thin seeding in flat-bottomed trenches varying in depth from 1 inch to 3 inches, according to the nature of the ground, and very prompt sticking. Nothing should remain to be done in connection with the working or manuring of the site. As far as seeding is concerned, a distance of 2 inches or 3 inches ought to

GARDENING FOR BEGINNERS.

LAYERING TREES AND SHRUBS.

OF the several methods adopted for increasing the stock of various kinds of trees and shrubs, layering is the most simple, and there are a few people who would fail to carry it out successfully. Moreover, it is the best of all methods for the propagation of many things, and it would be difficult to raise large stocks of some subjects by any other means. So important is this method of propagation that nurserymen usually set aside a section of ground solely for the purpose. This is called the "stool-ground," and the plants on it are reserved solely for layering. A modified system of coppicing is adopted, whenever possible. Thus, in the winter-time, clumps of vigorous shoots springing from old rootstocks are seen.

During March and April a sufficient number of the most suitable shoots are selected for layering, and the remainder cut away. After layering, little other attention save cleaning is necessary until autumn, when the layered branches of many things will be rooted well enough for removal; and another crop of young branches will have been formed for the following year. In some cases, however, the layered branches take more than one year to root well enough to warrant their removal, but in such cases it usually happens that new growth from the stool is not vigorous. A familiar example of a common tree which is raised from layers is the common Lime, while the London Plane, various Maples, Sea Buckthorn, some kinds of Cornus, Lilacs and Philadelphus may be increased in the same way. Layering is often resorted to



1.—A PREPARED BRANCH READY TO BE PEGGED DOWN TO THE SOIL AT THE PLACE WHERE THE TONGUE IS MADE. A TONGUE IS NOT ALWAYS NECESSARY.

when a stock of *Magnolia grandiflora* is required, for although layers take from two to three years to root, it is practically the only means of propagation which is reasonably effective. *Eucryphia pinnatifolia* has been increased by layers, but it cannot be said to be such a good means of propagation as seeds, for branches take a considerable time to root well enough to warrant their removal from the parent plant, and even then they have a habit of dying off suddenly during the first season after removal.

Layering Rhododendrons.—Some nurserymen make a speciality of increasing Rhododendrons and Azaleas by this means, and although it takes a longer time to produce saleable plants than by grafting, those raised from layers have the advantage of being on their own roots; therefore there is no danger of suckers appearing from the base and robbing the scion, which sometimes happens with grafted plants. Although the removal of such suckers is an easy matter in the first instance, it must be remembered that the suckers are not always very distinct from the remainder of the plant, and an inexperienced person might easily let the two grow together unknowingly until the sucker flowered, by which time serious harm may have been done to the plant.

Heaths and Other Shrubs.—Heaths and several Heath-like shrubs are sometimes increased by layers, although that means of increase does not produce such good plants as those raised from cuttings. Yet, where proper propagating convenience is not available, the method may well be resorted to. With the layering of Heaths a different method is adopted than is the case with shrubs with strong branches. In the latter case the branches are pegged down, after being tongued or not (see Fig. 1), as the case may be, into light, sandy soil; but the branches of Heaths are

weighted into the soil by means of stones. This work is accomplished at almost any time during spring and summer, and the stones are left in position for about two years before the young plants are ready for removal. In the case of various kinds of *Rubus*, a different method of layering is adopted than with other shrubs, for the points of the branches are pegged into the ground, and from these swollen buds appear, which eventually form strong young plants. Several dwarf members of the *Prunus* family, such as the double forms of *P. japonica*, *P. triloba* and *P. nana*, which are sometimes found difficult to increase by means of cuttings, respond readily to layering, and branches tongued and put down in the ordinary way in March may be removed as well-rooted plants by the following October. The same may be said of the evergreen kinds of *Ceanothus*, for such species as *rigidus* and *papillosus* are sometimes difficult to root from cuttings, though roots form well from layers. *Wistaria chinensis*, *W. multijuga*, shrubby *Spiræas* (see Fig. 2, and Winter Jasmine (see Fig. 3), may be grown from layers, and, in fact, almost any of the ordinary garden shrubs. There are, however, one or more reasons why layering cannot be adopted for all shrubs, for in the case where suckers are undesirable, other ways of propagation would be more suitable; then, when stock is scarce, layering would be less economical than other methods, for one layer would form several cuttings or grafts. When layers are put down in an ordinary shrubbery, care should be taken to secure them from injury, for careless hoeing might easily spoil a season's work.



2.—AN ESTABLISHED PLANT OF A SHRUBBY SPIRÆA SIX MONTHS AFTER THE PROCESS OF LAYERING.



3.—WINTER JASMINE IS EASILY LAYERED. YOUNG PLANTS SHOULD BE SEVERED FROM THE PARENT STOCK IN OCTOBER.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Shrubberies.

Willows.—For planting beside streams these are highly ornamental, and may be kept cut hard back each season.

Shrubs for Winter Effect.—The value of many of the commonest occupants of our shrubberies when properly treated is becoming more apparent each year. At this season, just as growth is commencing, they should be pruned hard to the ground. To see them to their best advantage, planting is best carried out in irregularly-shaped beds. *Cornus alba* and the variegated-leaved variety, *Salix viminalis* and *S. cardinalis* give brilliantly-coloured stems, while other subjects that may be treated similarly are *Rosa rugosa*, *Spiræa Douglasii*, *Populus alba pyramidalis*, *Leycesteria formosa* and Golden Cut-leaved Elder. After pruning, fork over the beds and make them tidy.

Laurels.—Where these have become unsightly, prune them hard back to the ground, when growth will soon be resumed and much improved. Scraggy bushes, if pruned back, will soon make shapely specimens.

The Kitchen Garden.

Carrots.—The main crop of these may be sown now as soon as the weather permits. To obtain the most satisfactory results, the soil should not have received any manure this last winter. Fork over the ground, add some wood-ashes and soot, and rake down to a fine tilth. Draw shallow drills 1 foot apart; sow evenly and thinly. New Intermediate is an excellent variety.

Exhibiting Roots.—Where extra quality roots are required for exhibiting and the soil is not favourable to their growth, bore holes with an iron bar into well-worked soil, 3 feet deep, in rows and fill with some finely-sifted soil. Be sure the hole is filled. Sow a pinch of seed on top of each and subsequently thin to one plant. Parsnips may be treated in the same way, but they require larger and deeper holes.

Peas.—Transplant as they become fit successional supplies raised in boxes in a cool house. Where possible, stake as soon as planted. Sow seed now in the open ground of good Marrowfat varieties. The dwarfier varieties are well suited for small gardens.

Tomatoes.—Admit air freely, when possible, to houses or pits containing these, as thereby a strong growth is encouraged and the plants when in flower set more freely. Give no stimulants until the first truss of fruit is formed and swelling. Pot successional plants firmly.

Artichokes (Globe).—Remove any protection now that was afforded the plants. Suckers may now be planted out in well-worked land that has been liberally treated with manure.

Lettuce.—Sow a pinch of seed for further supplies, and continue to plant out from previous sowings.

The Plant-Houses.

Ferns.—The plants will need shade from bright sun. Keep the surroundings moist by frequent dampings of the floors and stages, but no syringing of the foliage. As growth matures, increase the amount of water. Keep a look-out for slugs, which are very fond of the young, tender fronds.

Cannas.—These make fine plants when in flower for decorative purposes, and are easily managed. I like to grow these plants in small pots, say, 5-inch, in preference to those of larger dimensions. Select a portion of the root with one good growth attached and grow in a warm pit. Water sparingly until a good growth is made, and when the pots are filling with roots, liquid manure-water will prove beneficial. In this manner frequent batches may be grown, and there are many beautiful varieties of varied and exquisite colouring.

Herbaceous Calceolarias.—Assist these plants with manure-water. Watch carefully that slugs do not attack the plants. These will soon need transferring from the frame in which they have been growing to the greenhouse.

Fruits Under Glass.

Melons.—The dull weather generally experienced has not been favourable for the early plants

of this fruit. Take every opportunity when the weather permits of admitting a little air to promote a good, sturdy-foliaged plant, closing early in the afternoon. As soon as the female flowers appear, artificial fertilisation must be resorted to by taking the male flowers (removing the petals) and placing them in the centre of the pistillate form.

Early Pot Figs.—Syringe the plants twice daily with tepid water and maintain plenty of humidity in the house by frequent dampings, using strong manure-water for this purpose in the evening. The plants, especially those that were only top-dressed, will need more water.

The Flower Garden.

Dahlias.—Examine the tubers and cut away any portions that show signs of decay, when the plants may be potted temporarily into pots just large enough to hold them, and placed in a cool house to make a start. Young plants raised from cuttings this season will require gradual hardening off.

Preparing the Ground.—To grow these well the ground needs to be in good order. Trench or dig deeply and work in plenty of humus. This is best done a few weeks prior to planting.

Cannas.—For bedding purposes the roots should be examined and started into growth in a cool, light structure.

Sweet Peas.—Another sowing of Sweet Peas may now be made in pots for planting out later to maintain a succession of flowers. Have the ground well prepared for those shortly to be planted out, if not already done. If planting in clumps is the method adopted, excavate the soil 18 inches or 2 feet, break up the bottom, place a good layer of manure in the bottom and return the natural soil. The addition of some fibrous loam, with a dusting of bone-meal and soot, will be beneficial.

Pentstemons.—Cuttings that were taken last year and rooted several in a 5-inch pot will make better plants and feel the planting less acutely later on if potted now singly into 3-inch pots. One crock in the bottom of the pot will suffice. Keep the plants close for a day or two, when gradually admit more air to render them fit for their permanent quarters towards the end of April.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Gooseberries.—Generally, unpruned bushes may now be safely pruned, preferably by thinning.

Figs.—These do fairly well in the warmer districts, and should now be prepared by pruning and rearrangement of the shoots for another year. Allow 8 inches or 9 inches between them, and do not shorten the young growths.

Peaches.—A large proportion of buds may be rubbed off at once, thus saving labour and benefiting the trees. There is still a certain risk from morning frosts destroying the young fruits.

Outdoor Vines.—These are decorative rather than fruit-bearing, though occasional bunches are produced. Pruning should no longer be delayed, and as occasion allows, lengths of young wood should be substituted for old, worn-out material. The Miller Grape and Burgundy are suitable sorts.

The Vegetable Garden.

Vegetable Marrows.—Seeds may now be sown for outdoor cropping, one seed in a 4-inch pot, starting them in a warm pit.

Broccoli.—A sowing of all sorts on a west border should be made in the course of the incoming week; sprouting varieties must be left till later.

Cauliflower.—King of the Cauliflowers and *Magnum Bonum* may also be sown to produce heads during summer and autumn. Walcheren does admirably in some gardens, and this also should be sown now. On very light soils sow the seeds in patches and thin out instead of transplanting them.

Savoy.—Make also a large sowing of this good winter vegetable, Drumhead for kitchen use and Green Curled for the dining-room. Allow plenty of space for the seeds, and the seedlings will be all the stronger. Drumhead and Wittingstadt Cabbages, if required, may also be sown, like Savoys, very thinly, and the latest batch of Brussels Sprouts may be sown, too, in the course of the week.

The Flower Garden.

Crown Imperials.—Give strong growths the support of a short stick to prevent them breaking from the roots.

Polyanthuses, as well as Primroses, may be sown now on a shady border. The seeds must be only slightly covered.

Asters.—I raise all these in cold frames, sowing them at this time on prepared beds of light compost. The bed of soil should be thoroughly moistened a few hours previous to sowing the seeds, which are covered with some of the unwatered compost. Protect from sun with mats.

Annuals.—Most of the hardy annuals may be sown either where they are to flower or in prepared beds for transplanting later. Prince's Feather and Lovs-lies-bleeding must be reserved for a few weeks longer, or else be sown in 2½-inch pots and raised in a pit to be planted out in May. To have *Salvia Horminum* or Blue Beard very strong, it should be forwarded in the same way.

Stocks.—A like method may be practised with Ten-week and other annual Stocks, sowing three or four seeds in each 2½-inch pot, afterwards removing all the seedlings but one. Treated in this way, the plants, on being put into borders, experience not the slightest check. Where there are many hundreds of seedlings raised thus, much labour is saved by arranging the pots in wooden trays, in which they are moved about as required.

Dahlias.—If it is proposed to plant old tubers, which come into flower much earlier than those from the current season's cuttings, they should be started at once, and can be safely planted just like Potatoes two weeks hence. Tuberous Begonias do fairly well treated in the same way, but they flower late.

The Greenhouse.

Cyclamen.—Those at present in 2½-inch pots should be transferred to 4-inch ones before they experience a check.

Begonia Gloire de Lorraine.—Rooted cuttings may need potting on, using a very open compost and potting very loosely. Another batch of cuttings, if needed, may be taken at once and the old plants thrown out. Reserve a few of the later-flowering plants for the greenhouse stage.

Coleus.—A few of these are useful. Cuttings root in a day or two in a stove propagator, and by attending to repotting as the plants need shifting and using a rich and porous compost, large specimens are rapidly produced. But quite useful plants can be grown in 5-inch and 6-inch pots, firming the material rather more than were further shifts to be given. *C. thyrsoides* should be rooted at the same time. It succeeds with less heat than is needed to force on the variegated forms.

Hydrangeas.—Old plants which have been wintered in sheds should now be started into growth. Those needing repotting or placing into new tubs must not be touched till growth has commenced. A proportion of the old soil, and roots as well, if they are abundant, should be removed previous to repotting, which should be done quite firmly. Small plants for the greenhouse will force readily in a stove temperature, and if cuttings have not yet been taken, no further delay should occur. Young, soft shoots root freely in a hot frame, and will make very desirable forcing material twelve months hence.

Acacias.—These flower at varying times, but they all need similar treatment. Once the flowers are past, the shoots should be pruned hard in, else the plants will get extremely unsightly and not be so floriferous. When growth recommences, big specimens should be turned out of their pots, the balls of roots reduced and returned to the same pots. Loam and sand suit them for a compost. Small plants, of course, need larger pots, but these also should have a portion of the tangled roots removed before repotting.

R. P. BROTHURSTON,

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Corylopsis veitchiana.—A new species from China, and not unlike *C. multiflora*, certificated a fortnight ago. The flowers are yellow, with brown anthers. From the Hon. Vicary Gibbs, Elstree.

Primula knuthiana.—A new hardy species collected in the mountains of the Tai-pei-shan province of Shensi, North China, by Mr. W. Purdom when plant-hunting for Messrs. Veitch. Its nearest ally is, to all appearances, the so-called *P. frondosa*, of which it is a glorified form. The species is obviously a variable one, the plants shown demonstrating this unmistakably in the size and colouring of the flowers. When more fully established, the plants may be expected to attain a much greater vigour than those now shown. From Messrs. James Veitch and Sons, Limited, Chelsea.

Prunus Pissardii Moseri flore-pleno.—A pretty variety with semi-double flowers of pale pink colouring. Obviously a good addition to the list of early-flowering deciduous shrubs, and a plant destined to be in request for forcing. From Messrs. James Veitch and Sons, Limited, Chelsea.

Rose Rose Queen.—A new Hybrid Tea of sterling merit obviously as a forcing variety, and one not likely to clash with any existing sort so far as that department is concerned. The shapely flowers are of the Lady Ashtown build and character, with possibly somewhat of the colour tone of Caroline Testout. Exhibited by Mr. W. E. Wallace, Eaton Bray.

Abies Douglasii fletcheriana.—This is a pigmy form of the type, the fifteen year old plant shown being less than eighteen inches in height, and of considerable density and formality of outline. From Messrs. Fletcher, Chertsey.

Hippeastrum (Amaryllis) Rose du Barri.—The name here given is more or less descriptive of a colour quite new in these plants, and, seen in a wholly self-coloured flower, is superb in the extreme.

Hippeastrum (Amaryllis) f. Musigay.—The colour is intense maroon crimson of a velvety lustre and finish, a magnificent variety in every way. Exhibited by Lord Rothschild, Tring.

Narcissus Helios.—Said to be a Barri, but, if so, it has the giant proportions of a big Sir Watkin, which it leaves very much in the rear in its refined beauty and comeliness. The colour is a good yellow, the perianth segments broad and overlapping, the giant crown, which is of the expansive type, tinged with flame colour on orange. A flower of perfect balance and symmetry (see illustration on page 160). From Mr. Walter T. Ware, Bath, and Mr. C. Bourne, Bletchley.

Narcissus Robespierre.—This is one of the finest of the incomparabilis class, a flower measuring 4 inches across the perianth, the crown being 1½ inches in diameter. The great feature of this sterling novelty is seen in the fiery crimson crown, the colour extending to its base.

Narcissus Rubellite.—This is a Poetaz form, and, so far as we remember, the first possessing such a brilliantly-coloured eye to be honoured by an award. It is a strikingly beautiful variety. These two were exhibited by Mr. A. M. Wilson, Bridgewater.

The following awards were made by the Orchid committee: First-class certificate to *Odontoglossum crispum* Samuel Gratrix, shown by

S. Gratrix, Esq., of Manchester. An award of merit was made to *Odontoglossum Queen of Gatton* (parentage: *O. Triumphans* × *O. percutum*), shown by Sir Jeremiah Colman, Bart. A similar award was granted to Lieutenant-Colonel Sir George Holford, K.C.V.O., for *Cattleya Dirce Westonbirt Variety*. Parentage: *C. Vulcan* × *C. Warszewiczii*.

The foregoing were shown before the Royal Horticultural Society on March 19, when the awards were made.

DAFFODIL NOTES.

TO anyone visiting Vincent Square on the 19th inst. it was obvious that another Daffodil season had begun in reality. A white-bearded gentleman who must well remember pre-Daffodil days was standing beside me looking at the new lovely soft yellow-coloured *St. David* on Mr. C. Bourne's stand when, after a moment's pause, he unexpectedly exclaimed, "When are they going to end?" We both agreed we did not think it would be in the lifetime of either of us. Year by year the tide of seedlings flows stronger and stronger, and as each season passes, along the high-water mark we find new and uncommon forms and colours. Tuesday in last week gave us a foretaste of what we may expect 1912 to bring us. Messrs. Barr and Sons, Mr. A. M. Wilson, Messrs. Bath, Limited, the Rev. G. H. Engleheart and Mr. C. Bourne all had something novel in their groups.

A Striking Novelty.—Perhaps the most striking one was the *Ajax* on Mr. Engleheart's stand with a pale warm pink trumpet and ivory perianth. Diameter of perianth, 3¼ inches; trumpet, 1¾ inches long by 1½ inches at the mouth. One of its ancestors was albicans, and by working on this with appropriate pollen, "Engleheart's Pink," as I should like the flower to be called, was evolved. It may be remembered that Mr. Adams of Wolverhampton exhibited a somewhat similar break last year which had been "made in Holland." These straws suggest the question, "Where are we going to end?"

Daffodils to Remember.—If one could imagine that we saw Castile through a magnifying-glass which not only enlarged perianth and cup, but also had the power of brightening the dull red of the latter, we would get as a result something like *Robespierre*, which stood out as the most conspicuous flower in Mr. A. M. Wilson's group. Its brilliant red orange cup is a very attractive bit of colour, and it richly deserved the award of merit which was bestowed upon it. It has a 4-inch perianth, and the cup is at least 1½ inches across. I ought to mention that there is only one bulb for sale, and that is priced at £20. *Rubellite*, from the same collection, also obtained a similar award. It is a glorious *Poetaz* of large size. As a rule, there seem to be two flowers only in a truss, which, I think, rather detracts from its appearance. It has a white perianth and an all-red eye. *Gyr Falcon* is a peculiarly taking giant *Leedsii*, "quite a show flower." Size: Perianth, 3½ inches; cup, 1¾ inches long and 1½ inches wide. Its perianth is slightly campanulate, and each of its segments is formed on the spade ace pattern; but its chief charm is the delicate suggestion of green, which is apparent throughout the whole flower. *Enone* is one of the old-fashioned *Leedsii*s, almost a self. Its

shade is difficult to describe. To me, green (*à la blue*) skim milk suggests what I mean. *Sealing Wax*, so named because of its solid red eye, is a good strong grower and "the earliest of all the reds and whites." Perianth, 2½ inches, and eye three-quarters of an inch in diameter. All the foregoing were exhibited by Mr. Wilson.

Messrs. Barr and Sons, whom I would like to personally congratulate on their excellent display, which was awarded a silver-gilt Flora medal, had many single specimens of new trumpets of varying degrees of excellence. As there were two flowers of the famous *Michael* there, one was able to make comparisons. In the early morning I do not think any had names, but long before the close of the show several of them had been christened. Who the godparents were who gave them their names I do not know, but they had picked out the best. *Cyrus* appealed to me very much. It certainly has a look of *Michael* about it, and it is much the same in size, but with a much less campanulate perianth. It failed in that it lacked that rich smoothness of texture which is the older flower's special characteristic. *King Arthur* was another good yellow, and *Atlas* was a large bicolor, 4½ inches across the perianth and with a 2-inch-long trumpet conspicuously recurved at the mouth. Those who dislike violent contrasts, such as we get in *Empress*, will like this bloom, but I must say I like a clearer-looking perianth. *Athene* had her photograph taken during the course of the show. I hope she has had justice done her, for I have persuaded the Editor to let readers have a peep before very long. Remember, please, *Athene* is coming!

As I am confining these notes to the newest of the new, I will only mention *Vulcano* before I pass on to Mr. Bourne's flowers. I propose to deal with the older varieties in the different groups next week. *Volcano* is the best of the *Copeland* doubles, in that it is quite symmetrical in form and the colour contrast is good and well proportioned, the red bits peeping up among the deep yellow being "just about right." I wonder if the lady to whom Mr. Herbert Chapman introduced me saw this flower and what her opinion of it would be. She told me the *Daffodil* that she liked best of all in the hall was the *Primrose Phoenix* on Mr. Bourne's stand. It is refreshing to meet a genuine and unsophisticated lover of doubles. I, perhaps, see too much of the monotony in them to make my judgment sound.

The cynosure of the Bletchley flowers was again *Helios* (see illustration, page 160); but whereas two weeks ago we saw it as a pot-grown bloom, on this occasion it had been cut from the open, and, furthermore, it had now an award card round its neck. Everyone at the committee thought it a very fine thing, and voted accordingly. By the way, its future address will be *Inglescombe Nursery*, Bath. *Thora*, the lovely pale cinnamon-cupped giant *Leedsii*, was shown in fair form, but I suppose because of the season it had not quite the same deep tone which created such a sensation last year at Birmingham. This, too, went the way of so many good things. *Inglescombe* again! You must know a unique specimen of the species *cormorant* dwells there. It is one that is never, never greedy, but is sometimes rather hungry, especially when the scent of *Daffodils* is in the air. The soft sulphur-clothed *St. David* again appeared, but something must have happened. If he were not a saint, I should have said his wife had smartened him up—his halo (I beg pardon, perianth) was so much flatter and

tidier, and his massive, squat trumpet had lost its ungainly appearance. I know now. His instinct told him he was going to Inglescombe—and he went. But my allotted space must be filled, and I, too, must go—to sleep. JOSEPH JACOB.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

HERBACEOUS BORDER (Wigtownshire).—The best time for mulching with organic manures, or these and leaf-mould combined, is the late autumn months, so soon as flowering is over and dead stems are removed. Done at that time, it acts in a protective capacity, and later its manurial properties are washed down into the soil and the plants receive the full benefit in their turn. If a dressing of manure be given, it should be dug in about the clumps forthwith, and, if room permits, there is no reason why this should not be done. The manure should be thoroughly decomposed and short, so that it breaks up readily. Any of the artificial manures advertised in our columns could be used at a later date, say, a month or six weeks hence, lightly pricking these in with a fork at the time of sowing. The Carnations might be top-dressed at any time, using good loam and leaf-mould, and bone-meal at the rate of a 6-inch potful to each bushel of the soil. Give an inch-thick dressing of the mixture, and press it rather firmly to the existing soil.

TWELVE HERBACEOUS PLANTS FOR JULY EXHIBITION (W. B. C.).—If, as we imagine, you are entering the competitive classes, much will depend upon the schedule and its wording, particularly with regard to such important matters as whether bulbous plants would be admissible. In the selection given we are assuming that they are not, and, therefore, give prominence to other things—*Iris Kämpferi*, *Hemerocallis flava*, *Lathyrus latifolius* The Pearl, *Lupinus polyphyllus albus*, *Monarda didyma*, *Heuchera sanguinea*, *H. brizoides*, *Helenium pumilum*, *Galega Hartlandii*, *Gaillardia grandiflora*, *Erigeron speciosus*, *Delphinium*, *Campanula Moerhousii*, *C. van Houttei*, *Chrysanthemum maximum*, *C. Robinsonii*, *Coreopsis lanceolata* and *Achillea* The Pearl. You should plant a group of each, and not less than three plants. You will find it difficult to grow climbers satisfactorily on a pergola overhung by trees, particularly if much shaded. If, however, you are not expecting much flower, you might plant *Akebia quinata*, *Aristolochia Siphon*, *Vitis vinifera purpurea* (this requires sunlight to colour it well), *Clematis montana* (for flowering early before much leafage is obtained), *Lonicera aurea reticulata*, *Periploca graeca*, *Polygonum baldschuanicum* and *Wistaria sinensis*. Usually, of course, the many species of Chinese Vines are well suited to the pergola and provide a rich leaf-colouring in autumn, while Clematises and Roses are without equal, provided circumstances will admit of a good flowering. The question as to what is best depends entirely upon the amount of shade, and of this you say nothing.

TREES AND SHRUBS.

TREES FOR WIND SCREEN (F. M. H.).—The Austrian Pine (*Pinus austriaca*) is the best shelter tree for the purpose; but you do not say what trees you have planted. In order to form a thick and permanent hedge, you could not do better than plant the common Holly.

INJURY TO STEMS OF AUCUBA (G. R.).—We have not heard before of rabbits gnawing the base of *Aucuba japonica*, but certainly the tooth-marks point to some such animal being the culprit. Bank-voles, however, very frequently gnaw young trees in the manner shown, and it may possibly be that they have been at work here.

EVERGREEN FOR NORTH WALL (Mrs. E.).—If you exclude green ivy there is really no good evergreen climbing plant suitable for the position you name as far North as Yorkshire, for variegated ivies are not likely to prove a success. You might, however, try an ordinary shrubby plant and keep the branches fastened to the wall until the space is well covered. *Cratægus Pyracantha* would

be as good as anything for the purpose. This might be planted any time between the present and the middle of May. Do not select large plants, for small ones can be established more easily. As a rule, good examples may be obtained in pots, and there is little chance of such plants going wrong. A plant of *Jasminum nudiflorum* might be introduced with the *Cratægus*.

FRUIT GARDEN.

LOGANBERRY ATTACKED BY BEETLES (G. W. N.).—The Loganberries have, no doubt, been attacked by the beetle *Byturus tomentosus*, which lays its eggs in the flowers of the Loganberry, Raspberry and Blackberry, the larvae feeding in the berries when they hatch out. The pest is rather a difficult one to deal with, since it pupates in and about the stools of the plants, flies quite freely in bright weather, and is found on wild plants common in hedges, and so on. Probably the best thing to do is to shake the flowers well on a dull day over a sticky board, so as to capture the beetles. (Tar is a good thing to use.) This must be done as soon as the flowers open, and, as far as possible, Raspberries should be attended to also. Spraying might also be attempted then, and lead arsenate paste should be used. It is at best only a partial remedy, and no effort should be spared to capture the beetles. They feed on the pollen of the plants named, and do some amount of damage in that way. They also attack Strawberries. They are small brown beetles, with distinctly hairy wing-cases.

GRAPE-GROWING UNDER BLACK SURROUNDINGS (J. G. K.).—We regret we have no information with regard to the experiments to which you refer, but it may be taken as proved that Grapes will ripen as well in the dark as they do in the light, and temperature has more to do with the matter than light, both as regards sweetness and colour; but anything that interferes with the access of light to the foliage will interfere with the attainment of full size, and especially of sweetness in the Grapes. Experiments recently carried out in France indicate that the number of leaves left in the shoot beyond the bunch of Grapes determines, to some extent, their sweetness; thus, two leaves allowed the production of Grapes which were less sweet than was the case where three leaves had been left. It would certainly be worth while trying the experiment of enclosing bunches of outside Grapes in paper bags (not necessarily black) to ripen, for the temperature would be considerably higher inside than outside the bags. It is interesting to note that it is the common practice in Japan to enclose fruits in paper bags. It is said they ripen well, are well coloured, and protected to a large extent from attacks by birds, insects and fungi.

MISCELLANEOUS.

LEAF-MOULD UNDER BEECH TREES (J. K. M.).—The leaves of the Beech make the best of leaf-mould, and it may be safely used for potting purposes. In this respect the leaves of the Oak are about on a par with those of the Beech.

INJURY TO LETTUCE (C. L. de T.).—The chief cause of the trouble with the Lettuce appears to be the attack of white worms and other earth-loving pests; but this seems to have been encouraged by having a rather sour soil containing too great a quantity of decaying vegetable matter and by insufficient ventilation. The soil might well be watered with weak lime-water, or with water containing about one ounce of sulphate of potash to the gallon; but the important thing to do in the future is either to sterilise the soil with steam or to find fresh soil altogether.

POULTRY AND RASPBERRIES (Le S.).—To prevent the possibility of harm to the buds or foliage of the Raspberry canes by allowing the poultry to run among them, it would be better to protect the canes by fixing light faggots of Thorn branches round their base as high as the foliage can reach. They can then do no harm. Annual Rye Grass would, we think, give you the best result. It would never do to sow Dandelions. They root so deeply and strongly that they would soon overrun the place and ruin the Raspberries. Do not let the grass grow within 1 foot of the stems of the canes, or they will not fruit so well.

LOW PLANTS FOR A GLASS PORCH (Novice).—It is quite impossible to suggest anything that will fulfil your most exacting requirements. Bulbs potted in the autumn will serve to maintain a display at this season; and for the summer such subjects as *Browallia elata*, *Lobelia tenuior*, *Nemesia Blue Gem* and *White Gem*, with *Petunias*, may now be sown. We think that a selection of tuberous Begonias would, during the summer, prove very satisfactory. We may say that there are no plants which have good foliage, produce plenty of bloom, will grow without fire-heat, and, above all, reach only a foot in height, this last item being a very heavy handicap. We have in our mind's eye a very similar situation to yours, which is always attractive. The main subjects employed are hardy Ferns and small specimens of such hardy shrubs as the more select ivies and the several varieties of *Euonymus*. These form the permanent occupants of the structure, and are enlivened by a few bulbs in spring, and by tuberous Begonias and *Campanula isophylla*, both blue and white forms, in summer. In autumn and winter a few berried *Aucubas*, with *Polyantuses* and *Forget-me-nots*, potted up from the open ground, bridge over the time till the bulb season comes round.

NAMES OF FRUIT.—*E. A. F. Beaumont*.—1, Hawthornden; 2, Dutch Mignonne; 3, Old English Crab.—*J. C. H. Matthews*.—1, Annie Elizabeth; 2, Newton Wonder.

NAMES OF PLANTS.—*J. B.*.—1, *Celastrus Areturus*; 2, *Cyrtotum ileatum*; 3, *Ampelopsis Vitis* (*Vitis inconstans*); 4, *Eranthemum nervosum*; 5, *Chlorophytum elatum variegatum*.—*P. H.*.—1, *Passiflora* species; 2, *Sutherlandia* species, possibly frutescent; 3, *Passiflora* species (?); 4, *Rhynchospora angulata*; 5, *Cestrum elegans*. Specimens should be sent in flower.—*J. C., Dundee*.—*Pittosporum eugenioides*.—*Col. J. C. Briggs*.—The Violet appears to be a poor form of *Maria Louise*.—*A. C. G.*.—*Maxillaria rubescens*.—*A. L. Ford*.—*Billbergia nutans*.

SOCIETIES.

READING GARDENERS' ASSOCIATION.

The fortnightly meeting took place in the Abbey Hall (kindly lent by Messrs. Sutton and Sons) on Monday, the 13th inst., when, notwithstanding another very wet evening, there was a good attendance, the president occupying the chair. The lecture for the evening was delivered by Mr. H. Wilson, The Gardens, Lower Redlands, one of the association's oldest members, the subject being "How to Maintain a Supply of Vegetables Throughout the Year." Although the culture of vegetables has been rather freely dealt with at comparatively recent meetings, Mr. Wilson gave a thoroughly instructive paper on the production of an adequate and continuous supply for the whole twelve months of the year. A prolonged and highly-interesting discussion followed the conclusion of the lecture. On the proposition of the president, Mr. Wilson was accorded a hearty vote of thanks. Mr. F. Townsend staged a large and very beautiful collection of forced *Narcissi* from the vice-president's garden at Hillside, which were greatly admired by all present.

THE HORTICULTURAL CLUB.

ON Tuesday night, the 19th inst., after the usual monthly dinner of this club, at which Mr. W. A. Binley presided, Mr. H. C. Long of the Board of Agriculture gave an interesting lecture on "Weeds," illustrated by a large number of lantern slides. Starting with the definition of a "weed" as "a plant in the wrong place," he dealt with a considerable number of the most common weeds experienced in gardens, considering that as he was addressing a horticultural club it was better, in view of the vast number of other species with which it was the province of the agriculturist to deal, to concentrate attention on those which interested the members more particularly. Weeds, he pointed out, varied greatly in habit, and presented various peculiarities in the treatment requisite for their repression and extirpation. One great difficulty in the last direction was the prevalence everywhere of uncultivated spots, on which weeds were permitted to grow entirely unchecked. This, of course, resulted in a practically inexhaustible supply of fresh seed, and as, in innumerable cases, these seeds were provided with means of wide dissemination by wind and other modes of conveyance, the most careful gardener was constantly handicapped by the immigration of fresh material. Some of the slides showed how the nursing grounds were maintained and encouraged on public places, where the authorities took no steps to remedy the evil by any sort of suppression. Many of the most pernicious weeds produce hundreds of thousands of seeds per annum, which become practically ubiquitous. Weeds belong to three categories—annuals, biennials and perennials. The first and second are the easiest to deal with, since their seedlings can be destroyed by hoeing and general surface cultivation, but the perennials, particularly those which produce underground creeping stolons or deep-seated tap roots, such as Couch Grass, some of the *Convolvuli*, the Dandelions and many others, if once allowed to obtain a foothold, require the most drastic measures of trenching to keep under, as the smallest portion of such root-stocks is capable in a very short time of re-establishing the plant, so that unless the disturbed soil be thoroughly purged, the supposed remedy may prove to be an aid to reproduction rather than the opposite. For the continued existence of such plants, however, it is essential, even in the most persistent of them, that they should be able to form foliage on the surface. The more drastically this is suppressed, the weaker and weaker grow the roots. The general moral of this is that the hoe is really the most effective instrument, since it can be used not merely to destroy the seedlings of the annuals and biennials, and thus prevent them seeding, but also, by constant cutting down of the creeping perennial foliage, of destroying these weeds also; but such treatment must be persistent to succeed. Spraying is also available in some cases, and a slide was shown where a field absolutely invaded by Dandelions scarcely showed a specimen on a part where spraying had been experimentally tried. Many of the slides showed the form of the various weed seedlings and also their root systems, and some very interesting data were given regarding the damage resulting to the growth of desirable flowering plants and crops generally by the robbing of soil nutrient and light resulting from neglected weed growth. Weeds, too, are often intermediate tenants of gardens, in which members inimical to the proper tenants of gardens. After the lecture an animated discussion ensued, in which members and visitors participated, and it was pointed out that with a few cultivated plants, such as *Harpagophytum*, *Anemone japonica* and the *Michaelmas Daisies* often proved so monopolistic and wide-spreading as to rank with noxious weeds when allowed to have their own sweet will among other garden treasures. A hearty vote of thanks to the lecturer concluded the meeting.

THE GARDEN.

No. 2107.—VOL. LXXVI.

APRIL 6, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes* but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The Sand Pear.—This is the common name of the Chinese Pear, *Pyrus sinensis*. It is the first *Pyrus* to open its flowers among the large collection of species cultivated at Kew. The flowers in colour and form resemble those of the common wild Pear, *Pyrus communis*, but open a week or ten days earlier. In addition to its value as a flowering tree in spring, the Sand Pear is delightful in autumn. At that season the leaves assume a deep red shade, rivalling those of the better-known *Cratægus Crus-galli*.

The Bardfield Oxlip.—This is a much more attractive plant than the many Oxlips of different colours we see offered for sale, and which can be raised from seeds. The true Bardfield Oxlip is more refined in every way, and is at present highly attractive in the rock garden and border with its distinctly pretty leaves and its heads of soft yellow flowers, which are not too large to look out of place, and are yet big enough to be most pleasing. It is a pity that the true Bardfield Oxlip is not more generally offered for sale by members of the nursery trade.

Hybrids with *Narcissus calathinus*.—At a recent meeting of the scientific committee of the Royal Horticultural Society the Rev. G. H. Engleheart made some remarks regarding the apparently very restricted distribution of this beautiful form of *Narcissus triandrus*. It is not apparently found outside a small area on an island in South Europe, about one and a-half degrees out of the latitude in which the type occurs on the mainland of Spain and Portugal. He also showed a beautiful and vigorous white hybrid between this and a variety of *N. Leedsii*, which might be likened to a hardy *Eucharis*. Several of these white and vigorous seedlings had now been raised. The committee unanimously recommended a certificate of appreciation to Mr. Engleheart for his work with these hybrids.

Double-Flowered Peaches.—A large group of double-flowered Peaches situated on a lawn in the vicinity of the Victoria Gate at Kew gives an excellent idea of the value of the various forms of *Prunus persica* for such a purpose, while good-sized trees growing in a shrubbery near the north end of the rockery and in other places bear testimony to their usefulness for other purposes. Whether white, rose or red flowered forms are grown, they are very attractive; but perhaps the showiest varieties are those with rich red flowers. These are conspicuous from a considerable distance and do much to brighten up the landscape and relieve the predominating colour—yellow—during late March and early April. As a rule, the Peaches are not at their best in the vicinity of London before April, but this year many trees

were in flower by the middle of March. Good varieties are *flore albo pleno*, white; *flore rosea pleno*, rose; *Clara Meyer*, rose; *dianthiflora plena*, rubro pleno and *magnifica*, red. When budded upon Plum stocks, they make vigorous growth, and nice bushy plants may be obtained in from two to three years from the time of working.

The Double-Flowered Marsh Marigold.—The dwarf, compact habit of this showy plant, together with its free-flowering qualities, warrant it attention from all who are interested in bog gardens or are responsible for the planting of the margins of streams or lakes, for there are few plants which may be more easily grown or which give a better account of themselves. Of much dwarfer and neater appearance than the type, *Caltha palustris*, it grows from 6 inches to 9 inches high. The double, golden flowers are 1½ inches across, and the flowering season extends over a period of several weeks, from late March onwards. By dividing the clumps after flowering it is possible to create a considerable stock in a short space of time.

Continuous-Flowering Balsams.—We sometimes hear it regretted that the annual Balsams which used to be so universally grown are now seldom met with; but as a set-off we have several other members of the family, introduced in most cases within the last decade or two, that are at the present time popular garden plants. *Impatiens Sultanii*, now represented by three or four forms, was among the earliest of this class. A giant among Balsams and a most continuous-flowering species is *Impatiens Oliveri*, from Central Africa. It forms quite a large bush, and is very rarely without flowers. These are of a distinct soft mauve tint, and must be looked upon as among the largest of the genus. Another scarcely ever out of bloom is the bright vermilion-coloured *I. Holstii*, which in many places does well outside during the summer. *I. Herzogii* has larger flowers than the preceding, with, in some cases at least, rather more of a salmon tint.

A Beautiful Flowering Shrub.—It is difficult to imagine a more beautiful sight than a well-flowered bush of *Prunus triloba flore pleno*, for the delicate rose-coloured flowers are 1 inch across and borne with great freedom from most of the buds on the previous year's growth. In the South of England it may be grown as a bush in the open ground; further North it thrives more satisfactorily against a wall with a south or west aspect. Of late years it has become very popular for forcing for greenhouse decoration. For whichever use it is grown it is necessary to observe one item; that is, in order to obtain the best flowering shoots, it is necessary to prune the annual branches hard back to within an eye or two of the base as soon as the flowers have fallen, for it is only by this means that really good shoots can be expected.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Chionoscilla Blue Star.—This is a neat and bright-coloured seedling *Chionoscilla* of my own raising, and derived from the seeds of *C. Sphinx*, one of Mr. James Allen's raising. It is one of the few which did not "recede" to the *Scillas*, and is smaller than the *Chionodoxa* parent. It is a nice little starry flower of a very brilliant blue, and my little patch now presents a very bright appearance in a corner of the rock garden. We might, I think, make more of these *Chionoscillas*, and I had hoped to seed it last year, but my flowers had been picked last year without my knowledge, and my hope of securing seeds was thus frustrated.

A Pretty Snowflake.—An unusually prettily-coloured variety of the Spring Snowflake (*Leucojum vernum*), reached me the other day for naming. It appears to be a variety of the yellow-spotted *L. vernum carpaticum*, but it has a feature not much seen among the Snowflakes of spring. This consists in the interior of the flower being suffused with yellow instead of being a charming satin white, as is usual in the Spring Snowflake. This feature of this particular variety is only seen when the flowers are turned up, of course, but it is a form I have examined with much pleasure and interest. It came from a Cheshire garden where bulbous flowers are much appreciated.—S. ARNOTT.

Narcissi to Sell from the Open.—This is a subject which would admit of much discussion. In the present instance I am dealing with it from the standpoint of an observer who has had occasion to make careful enquiries from growers and from florists in a provincial town in Scotland, where *Narcissi* are sold as cut flowers in annually increasing numbers. The three most popular varieties seem to be Golden Spur, Barri conspicuus and Sir Watkin. The points involved are cheapness of bulbs when beginning the stock, free increase and a good flowering habit, together with the fact that they are easily grown and come into flower at a suitable time in the open, combined with supplying flowers which take the market well. Possibly it may betoken a poor taste on the part of the buyers, but it is found that these three sell as well to the shops as choicer and more modern *Narcissi* costing a great deal more. The fine colour of Golden Spur, the good effect of Barri conspicuus and the handsome flowers of Sir Watkin all tell. Quality of bloom from a florist's point of view is not so much desired as good colour and long stems.—BULB-GROWER.

Daffodils Under Glass.—The Rev. J. Jacob, in his excellent notes on "Daffodils Under Glass," page 152, March 23, raises an interesting question when he designates one who admires an uneven, irregular, decorative Daffodil as a "semi-educated person with an uneducated Daffodil eye, for such flowers appeal to him for their very unevenness." There are thousands of such persons, who, in the eye of the florist, are condemned for their bad taste, but who, nevertheless, possess an instinct for what is artistic and decorative. They may admire the beautiful and refined form of a Home-spun bloom; but place before them a Frank Miles, with its gracefully-twisted perianth, and they smile an appreciative smile. They are not all florists, nor likely to be; it is a vane which points the way the wind blows, and is called public taste.

Is this taste for the artistic catered for by the hybridist? I answer, No. He simply caters for the sacred circle of florists' flowers, which are too circular and even to be of much decorative value. I do not wish to disparage the remarkable advances made by cross-fertilisation, but I seriously think that more could be accomplished to encourage the development of the decorative Daffodil. With the aid of Mendel's laws, and for once violating the dictum of the florist, we may be able to create blooms of cactus, narrow-petalled, reflex, incurved, twisted and crested types.—J. E. D.

Crocus King of the Whites.—This is one of the newer varieties of the Dutch Crocuses, which, apparently, are once more taking a stride forward, several new varieties having come into commerce lately. King of the Whites is not only larger, but is better shaped than the old Mont Blanc, which is still a favourite. I have had this beautiful Crocus for a few years now, and as my clumps increase in size, so they do in beauty. It is now offered in several English catalogues, and is worth securing in autumn by admirers of the Crocus of spring.—X.

Fritillaria pallidiflora.—Although in cultivation for a good number of years, this Snake's-head Lily continues comparatively scarce and expensive. It is unfortunate that a greater demand has not arisen for it, as it might be increased by means of seeds, as it is not a bulb, which multiplies freely by offsets. It is a very distinct member of the genus, having broad, glaucous leaves and handsome yellow flowers. It is an excellent subject for a fairly dry place in the rock garden, although it will do in a moister one. I grew it for years along with some others of the genus not often seen in a dry, sandy border with an open and light subsoil, and, although it was dwarfer there than in stronger soil, it did well in every way. It should be planted about two or three inches deep in early autumn. It may be added that the yellow flowers are prettily chequered in the interior. It was introduced from Siberia in 1880, and is quite hardy.—T. T.

English-Grown Hyacinths.—The interesting little note by the Rev. Joseph Jacob on page 142, March 23, on the group of Hyacinths shown by Messrs. Bath reminds me of the "Scottish-grown Hyacinths" which we read of in Justice's "Scots Gardiners' Director," and which were raised from seeds and offsets by the author of this book, the preface to which is dated 1754. Justice gives a full account of his procedure in saving and sowing seeds from his Hyacinths, and also from offsets, while he tells us that his flowers were as good as those from Holland. It would also appear from his account that the bulbs were better than the Dutch ones. His description of his methods is too long to quote, but it is well worth reading by those interested in the question. If Justice could raise in Scotland flowers equal to those from Holland, and, as has been shown by Messrs. Bath, good bulbs can be produced in their grounds, there seems little reason why the cultivation of these bulbs on a commercial basis should not be largely engaged in.—A.

How to Arrange Daffodils.—As Mr. Herbert Chapman has introduced my name in connection with this subject in THE GARDEN for March 23, page 142, perhaps I may be allowed to follow it up. I need hardly say that I agree with his views, and I am very glad that he has raised this question, which I hope will be discussed by other lovers of the Daffodil. It seems to me that if we are to

arrange our Daffodils in straight lines and triangles, with every bloom in an "eyes front" position, it would be better to show them on boards or boxes like Pansies or Dahlias! Of course, when one is arranging flowers for classes at Daffodil shows—where the number of vases is fixed and where the number of blooms to a vase is generally restricted to three—it is almost impossible to avoid stiffness and straight lines; and in this case stiffness and uniformity are perhaps advisable, as the object of such classes is comparison. But surely in a group of Daffodils, when there is no fixed limit to the number of vases or to the number of blooms in each, the object aimed at should be to arrange the blooms so as to show their grace of form from as many points of view as possible, and to make the effect of the whole as light as possible and to avoid flatness. An artist has a great eye for perspective, and surely this is as desirable in a group of flowers as in a picture. A flower which can only be looked at from one position and which has no profile is not, in my opinion, an ideal flower, and this applies to groups of flowers. There seems to be a tendency at the present time to arrange Daffodil groups as if lining a grave or as if trying to imitate a wall-paper. Of course, there is the other extreme. One sometimes sees Daffodils literally thrown into vases and dumped down anywhere on the staging. Every vase of blooms must be grouped in itself, and the varieties must be blended as to colour and form, but this is the whole art of arranging, and the "highest art is to conceal art."—CHRISTOPHER BOURNE.

—Mr. Chapman, in his note in THE GARDEN of March 23, page 142, has opened a door for the discussion of a subject which will interest all who have the welfare of the Daffodil truly at heart. So much has been done of late years in the way of improvement in the methods of exhibiting flowers that we may well pause to consider whether the Daffodil is treated in the best style, or whether we might not add to the artistic effect of our exhibits in some way. Look at Carnations and Roses; how much better in every way is the present mode of showing the blooms with stems and foliage than the absurd way (now, I am thankful to say, almost obsolete) of showing the flowers stuck into a green board and, in the case of Carnations generally, mutilated and backed by the ridiculous paper collar! Who could possibly tell from such samples what the real capabilities of the plant were? I am not saying that the Daffodil is, as yet, suffering much from dressing, though I regret to say I have seen paper collars used to keep the perianth from reflexing, and it seems a great temptation to some to use their thumb on a flower that does not naturally want to lay its cup quite flat against the perianth. Surely a flower, if it is worth showing at all, needs neither the paper collar nor the assistance of the thumb. Mr. Chapman refers to a remark that was made about Mr. Bourne's lovely exhibit at Vincent Square. I was at a loss to understand the meaning of it, and am ready to join issue with any so-called true florist who wishes to see the bloom only and thinks of nothing else, caring little whether it has a graceful stem and, still less, looking for tasteful arrangement. If the Daffodil is to climb to the topmost rung of popular favour, which it is fast doing, we must exhibit our flowers in such a way that we show the great possibilities it offers for decorative effect, and not fall back into the rut which the old-fashioned florist was so much inclined to be content with.—W. A. WATTS.

Why Snowdrops Fail in Some Soils.—I have read with much interest the correspondence in your issue for February 17 and March 2 on the above question. In this district (West Ilsley, Berks), where the soil is of a light nature on chalk, there is no difficulty in growing the double Snowdrop, but it is almost impossible to grow the single variety. I have planted several hundreds of bulbs, and the only ones that have really succeeded are a few that I brought from Leicestershire some years ago and planted just as they had started into growth at the end of December or beginning of January. These bulbs were growing in the shelter of bushes, and were on the surface of the ground when I moved them. Do any of the bulb-growers sell their bulbs from the open ground as they are starting into growth, say, at the end of December? as it would be interesting to repeat the experiment.—F. W. H.

The "Rock Garden" at Edinburgh.—Your correspondent's laudation of the rockery, page 129, March 16 issue—it cannot properly be called a rock "garden" now—in Edinburgh Botanic Gardens is misplaced. As one who was well acquainted with the old rock garden, I can aver that as a home for alpine plants the place has been ruined. Under the old system, though the "pockets" were perhaps a little too formal (a detail which could easily have been rectified), one could be sure, at this time of year, of seeing delightful groups of spring flowers. Under the new régime there is little to be seen except huge masses of reddish rock, most of which must weigh over a ton each, so arranged as to give good scope for games of hide-and-seek among children, but of no use to plants. The proportion of rock to soil is such that it must be a continual struggle for existence among the unfortunate alpine plants dotted here and there. In fact, it has been shown already that, except in very rainy seasons, the sprinklers must be kept playing most of the summer days to keep the plants alive, making a visit to that part of the gardens in warm weather a most unpleasant experience. Those who protest against the extermination of magnificent Rhododendrons and the abolition of grassy slopes in order to provide more room for hideous masses of red stone are quite justified.—EDINA.

A Simple Arrangement of Narcissi in a Shallow Dish.—I enclose a photograph of Narcissi Barri conspicuus and Poeticus in a shallow dish 3 inches deep and about a foot in diameter. After trying many more or less elaborate, inefficient and costly contrivances, I found the following the most effective, durable and inexpensive. I bought a yard of the smallest wire-netting for a few pence and got the ironmonger to cut it into three 1-foot pieces. Each of these made a flower-holder. I took the 1-foot piece and began by bending the four corners to the centre; then placed it in the bowl, corners downward, and gradually crumpled it up till it roughly fitted and filled the receptacle. Then I covered it with a layer of moss, and found I had at last achieved a really satisfactory flower-holder. One has only to thrust the stalks of the flowers into the dish through the moss, and the several layers of wire hold them quite firmly in place, so that each day it is easy to lift the whole at once and empty, and refill the bowl with fresh water, and the flowers last much longer. This dish of Narcissi, in fact, had been arranged for some days, with no idea of it being photographed, when a photographer chanced to see it and expressed a wish to make a picture of it. A more artistic effect is gained by using fewer flowers,

so that they appear to be growing in the bowl. In summer I find it equally useful for sprays of Roses, Sweet Peas and many other flowers. It makes an agreeable change from the high vases (usually employed for flowers with long stems), of which one gets a little tired at times, and allows the use of tall flowers on the dinner-table without interfering with one's view of opposite neighbours.—AN AMATEUR.

Gold-Laced Polyanthuses.—The note by Mr. Bentley, page 118, March 9, and that subsequently sent by Mr. A. Dean, page 142, March 23, on the above, recall the pleasure one experienced long ago in growing these refined flowers. I can well recall George IV. and Lancer, besides a number of good seedlings, some of which were afterwards named. Seeds of gold-laced Polyanthuses are offered still, but I fear that the stock whence they come can hardly be expected to produce even a small number of flowers of the true, old-fashioned gold-laced Polyanthus we used to know. It had not the value in the garden that the self-coloured

THE KITCHEN GARDEN.

BRUSSELS SPROUTS.

FEW vegetables are more appreciated from October till April than the above, and to get as late a supply as possible I have found it advisable to rely upon seed sown in the open ground. Sow thinly to ensure strong plants; at the same time, give good land, so that the crop is not starved in any way. Of course, plants raised thus are not equal in size and do not bear the quantities of Sprouts that plants produce from seed sown under glass earlier in the year.

Suitable Varieties.—There are not a great number of varieties, but ample for all seasons, as mere variety does not assist the grower. At the same time, some kinds are more suitable for early supplies than others, and the dwarf kinds, such as Dwarf Gem, are most suitable for late supplies. I have also found the medium



CUT NARCISSI ARRANGED IN A FLAT BOWL WITH WIRE-NETTING AND MOSS.

Polyanthuses have, but, to those who liked to study the individual beauties of the flowers, they were highly satisfying. Like the florists' or Stage Auricula, these gold-laced Polyanthuses are flowers for the devoted amateur who attends to the plants himself, and are especially plants for the man with a small garden with a frame or two. The decay of the hand-loom weaving had a great deal to do with the decadence of this flower, in Scotland as well as in England, and in places where the gold-laced Polyanthus, the Auricula, the show Pansy and other florists' flowers were so largely grown, the Polyanthus is but little seen now.—S. ARNOTT.

FORTHCOMING EVENTS.

April 10.—East Anglian Horticultural Club Meeting. Lecture on "Roses," by Mr. W. Mallet. Kingsbridge (Devon) Daffodil Show. Royal Caledonian Horticultural Society's Spring Show at Edinburgh (two days).

April 11.—Cornwall Daffodil and Spring Flower Show at Truro (two days).

or dwarf sorts more hardy than those which produce very coarse Sprouts, and they are superior in flavour. A large, coarse Sprout is by no means an ideal vegetable, and is less profitable. Such varieties as Paragon, Exhibition, Holborn, Paris Market Selected and Dwarf Gem are all excellent; but, of course, for sale purposes the larger varieties, such as Matchless, Giant Perfection and others, are favoured. The great feature of these kinds is to plant early, so that a large quantity of Sprouts are produced from the top to the base of the stem. When the lower Sprouts are taken, those above soon increase in size and are ready to gather, the large heads being retained till the plants have finished furnishing Sprouts.

Importance of Deep Culture.—Cultural details for these are not very different from those for other Brassicas. At the same time, owing to the plant being a deep rooter and requiring a lot of space, deep culture, no matter what kind of soil, is essential, so that the land should be well prepared in the winter by double-digging or trenching.

Large masses of rich manures are not advised, as these have a tendency to coarseness or large, open Sprouts. Hard, firm, close Sprouts are what is desired, and these set as close as possible up the stem without waste of any kind. I have also found, whenever possible, it is best to give this vegetable a change of quarters yearly, and always an open position. A cleaner and firmer growth results. Plants in any way coddled fail to produce a full crop.

Distance to Plant.—Another point is to give ample space between the plants; 2 feet at least should be allowed between the rows, and 18 inches between the plants in the rows. I have given the large sorts 3 feet, and gained by so doing, as the produce was better, firmer and less injured by sudden changes of weather. Though 3 feet may be thought somewhat liberal, it is an easy matter at the time of planting to put Lettuce between, or to sow a row of Spinach. These are cleared before the land is required for the Sprouts. Another great advantage in wet seasons is that it is much easier to gather the crop than when they are unduly crowded. For latest supplies from plants sown in the open, the smaller varieties do well 2 feet apart and 12 inches to 15 inches in the rows, according to whether the land is rich or otherwise. G. WYTHES.

SEASONABLE NOTES ON VEGETABLES.

Hoeing.—It is quite impossible to over-estimate the importance of incessant hoeing in the vegetable quarters. In the summer the main value of the operation may lie in conservation of plant food in the soil; but earlier in the year it facilitates the admission of warm, fresh air, thus encouraging progress in the crops and, at the same time, prevents the establishment of weeds the seeds of which are now germinating so healthfully and abundantly. It is sound practice to run the hoe through the surface of the soil between the lines of plants as frequently as the time can be afforded, provided that the ground is not wet at the time of the operation. The Dutch hoe is the more convenient tool, but now and again it should be laid aside for the draw or cutting hoe, or, if that is not available, the blade of the Dutch hoe should be reversed and stabbed into the surface with a view to preventing the formation of a hard sole 1 inch or so down.

Planting Onions.—Onions raised from seeds sown in boxes at the end of January or during the first half of February will now be splendid, stocky plants where they have been hardily grown, and the sooner they can be placed in their permanent positions the better the results are likely to be. It is more than probable that one man may be going for big bulbs and another for a general

crop that will enjoy comparative immunity from the maggot; but this will not make the smallest difference as regards the desirability of prompt planting immediately the conditions are favourable. The site will, in either event, have been properly prepared, and in planting for big bulbs the lines should be 15 inches asunder and the plants a similar distance in them, while for smaller bulbs 12 inches between the rows and 5 inches, or even a little less, in them will prove satisfactory.

Outdoor Tomatoes.—Those who desire to have a crop of Tomatoes in the open quarters or on walls or fences in the garden during the forthcoming

and grow them on to one stem. Short-jointed plants which have grown steadily and strongly are the most valuable for outdoors.

Vegetable Marrows.—About the middle of the month is an excellent time to sow these seeds, and no efforts must be spared to ensure sturdy advance right from the start. Each seed should have a small pot containing a compost of loam, leaf-mould and sand, and it ought not to be necessary to transfer from these to pots of larger size. At the same time, a check due to cramping of the roots must be avoided, and this may force recourse to moving forward into a larger pot. It may be well to remind amateurs that seeds of the bush varieties sown after the middle of May where the plants are desired to fruit will yield splendid crops, and the plants do not occupy much space.

Autumn Green Vegetables.—Where a supply of Savoys is required for use in the early months of the autumn, and seeds have not yet been sown, the task must be accomplished at once. The plants demand a long season of growth, and, unless this is allowed for, disappointment must ensue. It is preferable to sow out of doors, thin distribution and early thinning being important rules to observe. Strong, stocky plants alone can produce satisfactory crops. H. J.

GREENHOUSE.

RAISING FREESIAS FROM SEED.

IN continuation of what I wrote on Freesias and their cultivation in THE GARDEN for March 2, I now propose to give a few notes on cross-breeding and the raising and rearing of seedlings, which may prove of interest to readers, for one has, only to get fairly started in work of this kind to find what an intense fascination it has. It is the first step that costs, and many a man, aye, and woman, too, who has begun this work in quite a small way has attained to considerable eminence in the pursuit.

Anyone sufficiently interested in Freesias could not do better than acquire the new set of varieties offered by Messrs. Van Tubergen, together with the yellow *P. Chapmanii* and the older species, *refracta*, *refracta alba* and *Leichtlinii*. By the intercrossing of all the above-named there is no doubt that a number of novelties may yet be obtained by careful and systematic work. In my experience the crossing of Freesias is a game of delightful surprises, as, with so many other floral subjects, it is the least expected which often happens, and *vice versa*. It is for this reason that some people abandon the method of keeping records of their work. Up to the present time I have kept a complete record, in order to be able



THE BIRD OF PARADISE FLOWER OF SOUTH AFRICA (STRELITZIA REGINÆ). (See page 169.)

summer, and have not yet sown the seeds, should do so without delay. Early sowing must be deprecated for those whose conveniences are limited, but it is imperative that sufficient time shall be allowed for the plants to make progress; hence the suggestion of immediate sowing. For preference small pots to accommodate one seed ought to be used; but if pots are too few or space is too valuable, set the seeds thinly in pans or boxes, and, immediately they are big enough comfortably to handle, give them a pot apiece

to trace the pedigree of every seedling; but in a recent letter I have had from Mr. Van Tubergen, he tells me he has given up in despair the keeping of exact records of his crosses, as it is impossible to trace the influence of the parents in the seedlings, and everything turns out opposite to what one expects.

I can corroborate this from my own experience, and as a case in point I may note that last season I flowered a seedling which, although not true blue, was the nearest to blue I have ever seen, the parents in that case having been two varieties which I should have expected to have given, if anything, something of a chestnut or crimson shade. Occurrences like this are, no doubt, capable of scientific explanation; but I have no desire to weary readers with abstruse botanical problems.

How to Proceed.—The first thing to be done is to select the seed-bearing parent, and as all the Freesias seem to seed readily here, the selection presents no difficulty. As the flowers commence to expand, and, if possible, before the pollen appears, the anthers should be removed with a very small and narrow-pointed pair of scissors. I find these easier for the work with Freesias than tweezers, as one can remove all the anthers at one operation. Daily supervision and care are required to see that no anthers remain on the seed-bearing plant. As soon as the flowers of the above are fully expanded, pollen from another variety, duly selected for the purpose, should be collected on a small camel-hair brush and gently brushed over the points of the stigma; and in my own case I usually give a further application of the pollen on the following day, always inserting a small wooden label in the pot, naming the pollen-bearing variety used. I have very few failures, nearly every pod swelling up and producing seed, though the quantity of seed in a pod varies considerably. After some weeks the pods commence to turn colour, and then I go over them daily and pick all that are just commencing to burst, placing them in tiny wooden trays on a sunny shelf in the greenhouse.

Seed Sowing.—As soon as all the seed is ripe—generally in May or June—it is extracted from the pods and sown in shallow boxes, which are stood outside, and take their chance of sun and shower, until there is a danger of frosts commencing in the autumn, when they are transferred to a moderately warm greenhouse. Here I should say that the little plants begin to make their appearance in early autumn, and the boxes must, of course, be kept free from weeds throughout. The bulbs are usually left in these boxes for two years, and in June or early July of the second year they are shaken out. One of two methods can then be pursued, either (1) to pot all the bulbs singly in tiny pots, which is a laborious process, and will probably require an enormous number of pots, or (2) they may be potted five in a 5-inch pot, four round the sides and one in the centre.

As the plants come into flower, some careful method of marking the finest varieties is then necessary, a task which will tax the ingenuity of

the raiser. Here we take double precautions by placing a tiny wooden label against each bulb, and also attach one to the growing plant, thus making doubly sure of securing the right bulb when the pot is turned out. Some of the seedlings increase rapidly and soon grow into large stocks, while others are very slow, and a few will probably die out altogether.

Some people who have read the foregoing will probably consider the work of seedling-raising in Freesias a lengthy and laborious task, but the reward always comes to the painstaking man. Let that fact be thoroughly borne in mind from the start.

Rye, Sussex.

F. HERBERT CHAPMAN.

THE BIRD OF PARADISE FLOWER.

(STRELITZIA REGINÆ.)

THE genus *Strelitzia* comprises some eight or nine species and varieties, of which *S. Reginæ* is the most beautiful. The flowers are produced in a

should be performed early in the year, or plants may be raised from imported seeds. It is recorded that the seeds of *S. Reginæ* are eaten by the Kaffirs. All the *Strelitzias* are natives of South Africa.

W. T.

THE ROCK AND WATER GARDEN.

A PRETTY DWARF HYACINTH.

SOME of the dwarf Hyacinth species supply the garden with delightful little subjects eminently adapted for the front of the flower border or the rockery, and well worthy of planting in the grass to associate with Snowdrops and Crocuses. Of these the few species which have a considerable resemblance to the *Muscari*, or Grape Hyacinths, although true



HYACINTHUS LINEATUS, A CHARMING DWARF HYACINTH FOR THE ROCK GARDEN.

spathe containing from four to eight flowers; these are very distinct and curious in form, and they are of a most brilliant orange and purple colour. The flowers continue to open all through the spring and summer months, remaining in a perfect condition for two or three weeks. Although the plant is generally treated as a stove subject, it will thrive and flower more freely when given the conditions of an intermediate house. During the summer *Strelitzias* require a liberal supply of water, but very little should be given in the winter months. Useful plants may be grown in 12-inch pots, using a compost consisting of two parts loam to one part peat, with a good proportion of coarse sand added. Where larger specimens are required, they should be planted out in a border, giving them a sunny position, when excellent results will be obtained. This *Strelitzia* can be increased by division, which

members of the genus *Hyacinthus*, are among the most pleasing. The best known of these is *H. azureus*, or *ciliatus*, erroneously called *Muscari azureum*. It is a valuable little plant, flowering, however, rather later than *H. lineatus*, an illustration of which accompanies this note, and is also less hardy. They differ mainly in the number of leaves and in their colour, *H. lineatus* being of a delightful light blue and having only two or, occasionally, three leaves. It is probably most pleasing in the form of a group, such as is shown in the illustration, these bulbs having been in their present position—in sandy soil on a low rockery facing south—for five or six years. There they are charming in February and March, with their little cones of light blue and their channelled leaves. This bulb is a native of Asia Minor, and was introduced in 1887. It is still rare in gardens.

S. ARNOTT.

THE FRUIT GARDEN.

SEASONABLE NOTES ON VINES.

OWING to the exceptionally hot weather of last year, the wood of the Vines matured splendidly. Notwithstanding this fact, the Vines have bled more than usual in many ordinary cases where pruning was done as late as Christmas Week. I certainly did not expect to see so much bleeding in the circumstances; but its effects have been mitigated by the freedom of the growth of the buds.

The Temperature.—Although the weather has been so unsettled of late, the temperature in vineries has been quite suitable for the Vines when supplemented by fire-heat on dull, cold days and at night. From now onwards it will be advisable

half-past three, according to the heat of the day—once more damp the path and borders. It is not wise to continue syringing the Vines after the young shoots have begun to grow freely. Do not at any time sprinkle water on the pipes when they are hot, because the sudden steam rising from them would scald the tender leaves.

How to Treat the Young Shoots.—The young side shoots should be about eighteen inches apart on both sides of each Vine rod, and if they are alternately placed, the shoots of one Vine will dovetail into those of another to a small extent, and so cover the roof of the house evenly with foliage. One shoot to each spur will be sufficient to retain. The others must be rubbed off, not cut. Do not attempt to tie down these young shoots until the bunches are approaching the flowering stage. The tips, of course, may be tied away from the glass, and every shoot must be pinched off at

On page 123 of THE GARDEN dated March 9 several varieties in both the show and alpine groups were enumerated as suitable for the amateur to commence with. They were all excellent, as the writer knows from experience in his own collection and those of several friends, but they do not meet with the approbation of three growers on the south side of the metropolis. This is precisely as it should be. In appreciation of flowers it is extremely difficult to find two people with identical views. Knowing this to be an irrefutable fact, I was careful not to assert, or even hint, that the varieties named were the finest of their respective sections, and I said so in just about as many words, but simply that they had proved excellent and pleasing to me. To these expressions I hold at the present time. My critics argue purely from the exhibitor's point of view, and may not be aware, as I happen to be, that for one man who grows Auriculas simply for exhibition, there are a score who grow them for the pure love of doing so and for the opportunity of enjoying the plants at all seasons of the year, but especially so when they are in bloom.

Mr. Douglas, than whose late father none was ever more highly respected in British—I think that I may safely say universal—gardening circles, confines his remarks to the alpine varieties; but he does not send an alternative selection, or I would most gladly embody it in these notes. In effect he says that for commercial purposes his father discarded five of them fifteen years ago, a fact which I regret, as I find them satisfactory. Mr. Douglas describes the example of Favourite as "as bad a specimen as could be selected," but he will do me the justice to acknowledge that I did not praise the illustration. As a matter of fact, however, the plant depicted secured a premier award at a leading exhibition of the flower, so one would not think that it could be hopelessly bad.

Mr. Nash, in an excellent letter, regrets the mention of varieties that are now, in his opinion and that of other exhibitors, superseded, and goes further and better when he mentions an up-to-date selection. He deals with the show group in particular, and with the greatest pleasure I give his list: Green edge—Mrs. Henwood, Shirley Hibberd, Abbé Liszt, Abraham Barker and Rev. F. D. Horner; white edge—Acme, Heatherbell, Conservative and Rachel; grey edge—George Lightbody, Richard Headley, George Rudd and Olympus; self—Mikado, Favourite, Mrs. Phillips, Ruby, Harrison Weir, Mrs. Potts and Miss Barnett. I give the names in Mr. Nash's order, and may add in commendation that they constitute an analysis from the winning stands at the Southern Show, an event which I have only once missed in the last decade or more. I and readers of THE GARDEN shall be indebted to Mr. Nash if he will now most kindly compile a similar list of alpine varieties.

Mr. Gibson does not particularise to the same degree, but he sends a long letter of considerable interest naming some of his favourites, all of which are embodied in Mr. Nash's list just given. As far as thin sowing is concerned, he favours even



NARCISSUS SIR WATKIN IN A NORTH LONDON GARDEN.

to maintain a higher temperature. Cultivators must watch the weather and be sure to have some heat in the pipes before that from the sun's rays goes down too low. When the young shoots are about three inches long, the artificial temperature in the daytime should be from 65° to 70°, and at night 60° to 65°; 5° rise from sun-heat may be allowed before any ventilation is required; then open the top ventilators a little and allow a further rise of 5° from sun-heat.

Atmospheric Moisture.—The amateur should observe the following conditions when supplying the moisture essential to success: If the house temperature is rather low early in the morning, do not damp down the borders or path, but directly the heat commences to rise, damp the path; later on, the borders; and if the heat is very great with due ventilation, once more damp both path and borders. At closing-time—from two o'clock to

three joints beyond the bunch, and beyond the second joint if there is not room for the full development of the main leaves. AVON.

THE FLOWER GARDEN.

AMONG THE AURICULAS.

Varieties.—The action of the Editor in instituting a special column devoted to the Auricula has been more than justified by the letters of appreciation which have been received from various parts of the country; but it came as a surprise to learn the number of readers who were so keenly and intelligently interested in the subject. Evidence of this is demonstrated by the letters of gratification and also by those, invariably most friendly and courteous, of criticism, and it is to the latter that attention will be devoted this week.

distribution, but would not allow the space which I invariably advocate to novices. F. R.

NARCISSUS SIR WATKIN UNDER TREES.

IN some past issues of THE GARDEN the question has been raised as to whether Narcissus bulbs were better if lifted or left untouched. Which view held the field has slipped my memory, but I am enclosing a photograph that certainly favours the let-alone theory. The group shown was planted seven years last autumn, and has never been disturbed in any way. The plants are growing under an Oak tree, and the sub-soil is mostly clay, while the only assistance they get is a sprinkling of chemical manure every spring when they are 1 inch or 2 inches high.

Highgate. C. T.

VIOLAS AND THEIR CULTIVATION.

FOR profusion of bloom extending from early spring to late autumn there are no better flowers for bedding than the Violas, although in planting them for this purpose discretion must be used in selecting the varieties. The exhibition kinds, as a rule, are not suitable, the exception to the rule being Agnes Kay, Mrs. Chichester, Lady Grant, Moseley Perfection, Louie Granger, Jenny Macgregor and a few others.

To show up to advantage they require planting in beds of the same colour; and what looks better than a bed of Rose Grüss an Teplitz (dark red) with a groundwork of Violas Meteor or Moseley Perfection (both yellow), or Rose Peace (cream) with a groundwork of Maggie Mott (mauve) or Mauve Queen? Then, again, the bedding varieties make admirable edging plants, and keep in bloom from early May until November; in fact, I might go so far as to say that I have had them in bloom around the borders throughout the whole of the year without any protection whatever.

Planting.—The soil should be well dug over and broken up to a depth of 1½ feet to 2 feet and some good rotten manure put in, also a little bone-meal and leaf-mould. The planting should take place now, and the surface should be slightly sprinkled with superphosphate of lime and forked in—with a hand fork for preference—not deep, only a few inches. The ground should be made fairly firm. For bedding, the plants ought to be put in about one foot apart, but for exhibition purposes quite 18 inches. They should never be allowed to get too dry. The blooms, as they fade, must be picked off daily; this is most imperative if a succession of bloom is required, and once a week it is necessary to go round each plant with a hand fork and just loosen the soil, say, 1½ inches to 2 inches deep, not deeper, or the roots will be injured.

Summer Treatment.—About June a thin layer of well-rotted manure which has passed through

a half-inch meshed sieve should be put around each plant. A very good liquid manure for them, if large blooms are required, is Canary Guano or soot-water given alternately twice a week. The liquid manure should never be given them when the ground is in a dry state, but after a fall of rain, or the plants should have a good watering first. Propagation is best done by means of cuttings taken in the autumn—September for preference. In selecting the cuttings, care should be taken to obtain the young growths from the centre or base of the plant. Do not try to strike any growths that are showing bud or any that have bloomed. They should be placed in rows in a cold frame, allowing about three inches between the cuttings.



STAPHYLEA COLCHICA, A BEAUTIFUL HARDY SHRUB WITH CREAMY-WHITE FLOWERS. (See page 172.)

The soil should be made up of loam and grit or coarse sand in equal parts. The plants root very readily. The lights ought to be kept on (and shaded) during the day only; this should be continued for a period of seven to ten days. When the cuttings have begun to root, the lights may be kept off altogether, except in very severe weather. Coddling must not be allowed. All dead leaves or other litter should be taken out of the frames, as these harbour insects such as slugs and woodlice. In the absence of a cold frame in which to put the cuttings, make up a bed in the open, but do not leave it later than the first week in September before inserting the cuttings. The Viola is perfectly hardy, and such cuttings will make sturdy

little plants by the next spring; but frame-struck cuttings produce the best plants.

Selection of Varieties.—I will now give a list of twelve varieties for bedding: Mrs. Chichester (white, with purple edge), Moseley Perfection or Meteor (yellow rayless), Dr. McFarlane (purple and black), Mrs. H. Pearce or Swan (white), Agnes Kay (white, with mauve edge), Lady Grant (white, with blue edge), Councillor Watters (dark blue), Bronze Kintore (bronze), Duchess of Fife (light yellow, with heliotrope edge), Mauve Queen (mauve), Cream King or Devonshire Cream (cream), and Louie Granger (rose); and twelve varieties for exhibition: Moseley Perfection (yellow), Geo. Dunn (dark rose, blotched with white),

Jenny Houston (purplish plum), Mrs. Chichester (white, with purple edge), Agnes Kay (white, with mauve edge), Kate Cochrane (black and purple), Ellen Smellie (white, with blue edge), Mary Burnie (cream, with heliotrope edge), Mrs. H. Pearce (white rayless), Duke of Argyle (deep plum, with darker streaks), Louie Granger (rose) and Mrs. Hervey (white, with deep purplish edge).

Raising from Seed.—Sow now in a gentle heat, prick off into a cold frame in May and plant out in June. These plants should bloom the following August or September; or, if no artificial heat is available, sow in a cold frame in July or the beginning of August, leave the seedlings in the cold frame until the following spring, and plant out in April. These later-sown plants should bloom in June or July.

WM. BIGGS.

ROSE GARDEN.

CLIMBING ROSES IN POTS.

FAR more reliable results can be obtained by climbing Roses in pots than when the same varieties are cultivated against the wall, or even upon the roofs of houses. Being in pots, they are easily removed to the open for better and more efficient ripening, while in the greenhouse borders, more especially a house of mixed subjects, they naturally remain more or less active, because of the humid treatment necessary for the other occupants.

One of the most essential points of culture among this class of Rose is to secure long rods of growth that can be thoroughly ripened. Recently I saw some really good examples of these, and have seldom seen our favourite yellow, Maréchal Niel, in better form. There is no doubt that this grand old Rose is not grown so extensively as once was the case, when almost every conservatory possessed a plant.

I would like to give a brief outline of how this and other climbers were treated in the case just noticed. The same treatment applies to William Allen Richardson, Mme. Bérard, Belle Lyonnaise,

Climbing Perle des Jardins and Gloire de Dijon. Whether the plants were upon their own roots, or grafted and budded plants lifted from the open ground, the routine was the same.

First of all, they were potted firmly into 9-inch pots, using a rich, loamy compost. This should be done early in the season to allow of the plants standing in a cool pit all through the winter. Before introducing to the house they are cut down to leave only two or three eyes. The rods from these are encouraged in every possible way. As the object is to secure some two or three of extra vigour, even the other shoots which may appear are broken off as soon as discovered. Trained to wires or strings some nine inches to twelve inches away from the glass, each rod is allowed ample light and air, when, with a little attention to tying, they will eventually reach 10 feet to 15 feet.

The growth must be kept clean and healthy from the first, and aided by liberal doses of weak liquid manures as soon as the roots begin to fill the pots. The end of August should see the growths a considerable length, and we may now proceed to assist in the more efficient ripening than can be secured under glass in the ordinary greenhouse. Remove the plants to a warm and sunny position outside, being careful to secure the long growths in some way. The pots should stand on a firm bottom, or the roots will be apt to wander through and the growth be continued longer than is desired. At the same time, they must not be severely checked by withholding water to the extent of distressing the plant in the least. It is preferable to place a few leaves, some litter, or even a board against the pots as a preventive to sunburning, which would considerably injure the roots. The influence of autumn sun and air will cause a natural ripening of the wood, quite unattainable had the plants remained under cover.

When starting the first batch for flowering, it will be well to give them a double shift, taking great care not to disturb the roots and to have the soil worked firmly and evenly between the ball and the new pot. Rods prepared in this way invariably flower well, and often produce blooms of extra quality when freely fed after the new growths are some six inches long. When the flowering is over, cut down hard once more, and as soon as the remaining eyes begin to push, repot again, this time reducing the soil and roots somewhat, after which confine to the two or three shoots and repeat the routine. With a fair number of plants the flowering season can be prolonged by introducing in successive batches. Some means must be found of keeping severe frost from both the wood and pots when retaining any for late batches. A cool house, lateinery, or shed will answer the purpose.

These notes are likely to be used most for *Marchal Niel*; but I may add that I never saw William Allen Richardson and *Gloire de Dijon* in better form under glass than when grown in this way. A. P.

TREES AND SHRUBS.

THE BLADDER NUT.

(*STAPHYLEA COLCHICA*.)

STAPHYLEA COLCHICA, popularly known as the Bladder Nut, is a beautiful hardy shrub, producing



THE REDWOOD TREE (*SEQUIOA SEMPERVIRENS*).

in early summer a profusion of large clusters of snow white flowers. It is by no means a difficult shrub to cultivate, and apparently it is quite at home in any good garden soil; neither does it mind a little shade, to which it is somewhat partial. It is, however, as a forcing shrub that *Staphylea* is probably best known, and it is a suitable companion in the conservatory to *Prunuses*, *Rhododendrons*, and shrubby *Spiræas*. It is even more handsome when forced, as the flowers are not so liable to be hidden in a mass of greenery as is the case when grown in the shrubbery.

THE CALIFORNIAN REDWOOD.

(*SEQUIOA SEMPERVIRENS*.)

THERE are no trees on the face of the globe that command greater admiration than the two *Sequoias* of gigantic proportions that inhabit the coastline of California. Concerning the Mammoth Tree, *S. gigantea*, we have heard from travellers many strange but none the less correct accounts. We have heard of the "Father of the Forest," a great prostrate trunk measuring 435 feet in length and 110 feet in circumference. This monster must have been longer when living, for along the inside of the fallen trunk is a tunnel 35 feet long and in places 8 feet to 10 feet high. We have heard also of the "Mother of the Forest," with 327 feet and a girth of 90 feet to its credit. Yet another curiosity is a big tree which had been purposely thrown, cut off 6 feet above ground, and a pavilion built on the standing stump. Inside the pavilion there is room for a very pretty dancing space, for two sets of lancers or for sixteen couples to spin round with ease. The dancing space measures 30 feet in diameter less 20 inches, the circumference 85 feet.

The Redwood is likewise a gigantic tree, and attains its greatest size on the flats where the soil is moist and the atmosphere misty. Under such conditions it grows to a height of 350 feet, with a diameter of 20 feet. On the slopes its maximum height is 225 feet and its greatest diameter 10 feet. Most of the large Redwoods in California are from 400 to 800 years old, but the trees begin to die down and growth falls off after the age of 500 years has been reached. A very old Redwood has been recorded showing 1,373 annual rings.

There is another side of great interest, and that is the growth of *Sequoia sempervirens* in this country. An idea of its rapid growth in the British Isles may be gathered from the fact that although it was not introduced before 1846, there are numerous trees between 70 feet and 110 feet in height, with girths ranging from 8 feet to 14 feet. Writing on the Redwood in a recent issue of the *Kew Bulletin*, Mr. W. Dallimore says: "If free growth and rapid development

were the only qualifications necessary to make this tree a success in British forests, it might be planted without further delay, but it remains to be proved whether the timber will be good enough to warrant extensive plantations. The important place occupied by the species in the lumber trade of America is, however, a sufficient recommendation to warrant it a good trial here."

Apart from the question of its value as timber, it is a tree of great beauty and interest, and one that merits a position in the parks and gardens throughout the country.

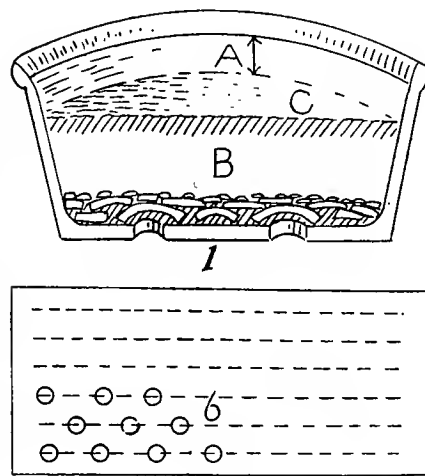
GARDENING FOR BEGINNERS.

HOW TO RAISE AND GROW CELERY PLANTS.

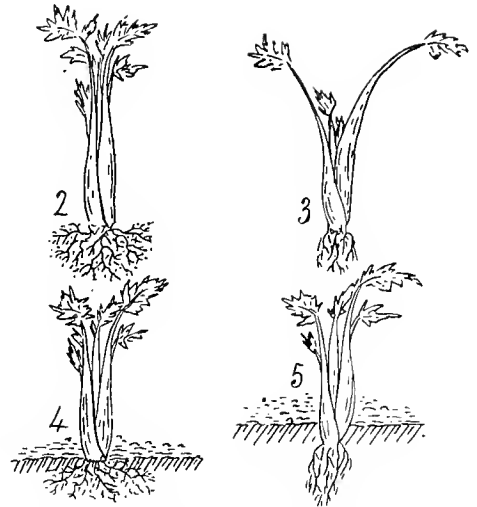
VERY large, luxuriant sticks of Celery may be grown without much difficulty if the plants are put out in a rich soil. Mere size, though, does not count unless the sticks are solid. A good deal of skill is required on the part of the cultivator if he is to succeed in growing really fine Celery plants, and the care necessary must be given right from the sowing of the seeds until the plants which result are ready for the table.

Sowing the Seeds.—These are best sown in a pan, as shown in Fig. 1. The pan must be washed clean and well dried before any soil is put in. First lay a few clean crocks over the holes in the pan, and on the crocks a few half-decayed leaves. Loam and leaf-soil in equal proportions, with a small quantity of well-rotted manure and coarse silver sand, will form a suitable compost. This must be put in as shown at A and B, the level surface C being nicely sprinkled with sand, on which the seeds should be sown. Cover them lightly with sifted soil. The surface of the latter must be $1\frac{1}{2}$ inches below the rim of the pan. A loose square of glass must be put on to conserve moisture. Maintain the soil in an even state of moisture, and keep the pan in a warm position near the glass, but not fully exposed to the direct rays of the sun. Supply moisture when necessary by immersing the pan in a vessel of water.

Transplanting.—Usually, Celery seeds are sown too thickly. Avoid sowing them so; a pinch of seeds scattered on the soil in the pan will be sufficient. When the seedlings are showing their third rough leaf, transplant them 2 inches apart in a similar mixture in boxes 4 inches deep. In this instance, however, some rotted manure or Hop Manure must be placed 1 inch deep in the bottom of each box. Be careful to select the seedlings so that all may be of the same size; this is important. Fig. 2 shows a good seedling and Fig. 3 a bad one. Fig. 4 shows the correct way to transplant and Fig. 5 the wrong way. The plant must not be buried too deeply, and its roots should be spread out evenly. Fig. 6 shows the surface of the soil in the box, and the dotted lines denote the rows of



1.—SOWING CELERY SEEDS AND TRANSPLANTING SEEDLINGS.



seedlings transplanted as shown by the small circles.

A Second Transplanting is advisable, and this time a cool frame must be used, as shown in Figs. 7 and 8 respectively. Fig. 7 shows the front of the frame and Fig. 8 the end elevation. Make up a temporary frame with boards placed on edge for the glass lights to rest on, if an ordinary frame is not available.

Cultivation in the Trenches.—The trenches—very shallow ones—must be prepared early in the season, so that the soil may have sufficient time to settle down, and in the meantime such crops as Lettuces can be grown on the ridges. For a single row of plants the trench should be 15 inches wide at the bottom, and for two rows, as shown in Fig. 9, 18 inches to 20 inches wide. Dig in and thoroughly mix with the soil a liberal quantity of well-rotted manure.

Tying Up the Growing Plants.—A, in Fig. 10, shows the wrong way to tie up the plants; B, the right way. If tied too high up and too tightly,

as shown at A, the young, inner stalks would buckle, as shown at C, Fig. 11. Neat tying keeps the plants compact, and prevents soil lodging in the centres when earthing is done.

Trimming the Plants for the Kitchen.—Fig. 12 shows the wrong way to trim a plant when lifted for use. The nutty heel (Fig. 13) must not be cut off; it is very palatable. Prepare the stick as shown in Fig. 14.

Varieties.—White: Extra Early Market, Matchless and Sandringham; red—Sulham Prize, Major Clarke's Red and Standard-bearer. G. G.

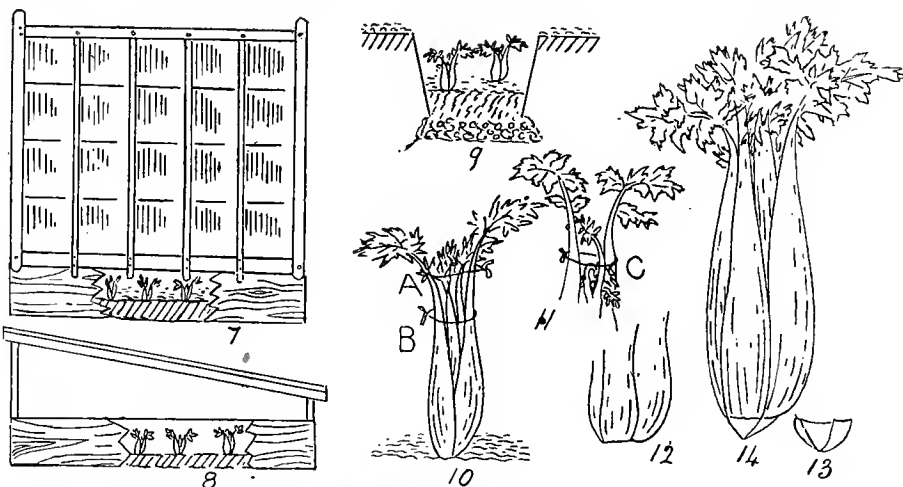
HOW TO PROTECT FRUIT BLOSSOM.

If a crop of fruit fails one year, another must pass before more blossom comes, so that the cultivator works among his trees for a period of two years before any reward is his, if a crop is then secured. So we should do all we can to protect every spray of blossom we can conveniently reach while it is fresh. It should be remembered that it is a very necessary thing to keep the flowers, dry; then they often remain uninjured even though subjected to 5° or 6° of frost.

Trees trained to walls may be protected by fixing mats, scrim, herring-nets (double folded), or even Fir branches over them. The mats, &c., should be kept from bruising the flowers, when the wind blows, by the placing of stakes or wires at an angle of 72° against the wall. The Fir branches, which must be flat and spreading, should be nailed to the wall. One branch with a spread of 3 feet will protect 6 feet of wall space below it. The branch, when its stem has been nailed to the wall, must be held in a sloping position by propping it outwards 1 foot from the wall with forked sticks.

Low bush and pyramid trees may be protected by the placing of double-folded herring-nets or light scrim over the tops, fastening the corners and other parts, if necessary, to stout posts driven into the soil so that they are just clear of the outer branches.

SHAMROCK.



2.—CELERY SEEDLINGS IN FRAMES AND PLANTED OUT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Shrubbery.

Privet.—The young growths, if taken now and inserted in a warm frame, will quickly root.

Forsythia suspensa.—This is a charming subject, whether for massing in a bed, isolated specimens in bush form for almost any position, or training to a pergola, house or a pole. When the flowers are past, the necessary pruning should be carried out.

Hollies.—Within the next few weeks the planting of Hollies can be carried out with safety. In transplanting, always take the greatest care of the roots. Endeavour to preserve a good ball of earth, and, if to be removed any distance, make doubly sure by matting up the soil, and do not expose to the air longer than is absolutely necessary. In fine weather spray the plants over with a rosed can and water at the roots. Established specimens will benefit by top-dressings now.

Ericas.—The present month is an ideal time for planting these. A collection of Heaths will provide something of interest at all seasons, and when planted in masses the effect is fine. If the soil is heavy, add plenty of leaf-mould, road sand and peat at the time of planting. A sandy soil with these additions suits their growth admirably, but in a year like the last they suffer badly from drought. A few of the best include *Erica carnea* and the double form, *E. cinerea alba* and *rosea*, *E. mediterranea hybrida*, *E. vagans* and its white variety, *Calluna vulgaris*, the common Ling, and varieties *Hammondii* and *Alportii*.

The Flower Garden.

Sweet Peas.—Those raised from seed sown early in the New Year will soon need planting into their permanent quarters.

Gladioli.—The planting of the bulbs should be carried out without delay. For the mixed border, and also planted in lines where space permits, for cutting purposes, these are indispensable. Bury the bulbs 3 inches or so below the surface of the soil and 1 foot apart. The addition of some road grit and wood-ashes forked into the soil will be found a distinct advantage.

Aster Amellus.—Where cut flowers are in request, a stock of these during the autumn is invaluable planted in lines. Now is a good time to increase them by division. Plant 10 inches to 1 foot apart. Seedlings vary in their time of flowering, and so provide a succession.

Annuals.—When the ground works well, further sowings may be made. Sow thinly and mark the position occupied by the seeds, so that these are not boed up or otherwise injured by mistake. Those sown in heat and designed for bedding purposes should be pricked off into frames or potted singly as becomes necessary and grown sturdily. Protect thoroughly from cold at nights.

Plants Under Glass.

Streptocarpus.—These plants will now be growing freely in a fairly warm structure, and diluted manure-water will prove of much benefit. The plants will not endure sun, and moisture must not be applied to the foliage, though the plants enjoy damp surroundings. Seedlings sown this year should be put out into boxes of fine soil as soon as large enough. Use plenty of silver sand on the surface.

Chrysanthemums.—By this date the bulk of these should have received their shift into 6-inch pots, and for a time water most carefully. A cold frame will accommodate the plants now, and air on all occasions when favourable should be liberally given them. Those that are intended for large blooms should be treated as advised for obtaining the best results. The decorative varieties, when nicely recovered from their shift, should be stopped again to ensure a bushy habit.

Freesias.—If the bulbs of these are to be retained for another season, no more growth than is absolutely necessary should be cut away. Continue to water until the foliage shows signs of ripening, when the supply should be gradually diminished and the ripening off assisted by all the air and sun that is possible.

Indian Azaleas.—As these pass out of flower, very carefully go over the plants and remove the old blooms. Keep the plants clean by occasional

syringings in bright weather, and before the new growth becomes too far advanced, pot any that may require it. The best soil should consist principally of peat, with a little loam and sand added. Give perfect drainage and pot very hard.

The Hardy Fruit Garden.

Peaches.—The young growths will soon be large enough for disbudding. First remove all those that are badly placed for forming a good-shaped tree. Do not overlook the fact that one growth will be required at the base of last year's wood, and that the leading growth is necessary for extension and to encourage sap into the fruit. A sharp look-out must now be kept for aphids, which, if allowed to go on unchecked, will soon cause crippled foliage. Syringe with an insecticide.

The Vegetable Garden.

Onions.—Those raised in boxes for producing exhibition bulbs must now be gradually accustomed to more air, as towards the end of the month, when the ground is suitable for working, planting is best carried out.

Cabbage.—Make a sowing of a suitable variety for autumn supplies. Sow thinly and transplant as necessary.

Spring Cabbage.—These this year are unusually forward. Remove any decaying foliage from the plants and give a light sprinkling of nitrate of soda while the weather is showery.

Soot.—This is a valuable agent in the kitchen garden especially, and in several ways. Seedlings newly germinated will benefit by light dustings, preferably during showery weather.

Potatoes.—The planting of maincrop varieties should be carried out now as speedily as possible, and in the Southern Counties with comparative safety. I prefer planting the tubers in large drills taken out with the spade. On retentive soils, if a layer of leaves or rotted long manure on which to place the tubers can be afforded, this is a distinct advantage. Avoid overcrowding; give 2 feet to 2 feet 6 inches between the rows and 18 inches between the sets. Select medium-sized tubers for planting, and if necessary to cut large ones in two, this is best done a few days before planting.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Late Grape Vines.—These will start naturally now and need not be subjected to forcing treatment. Not much fire-heat, little moisture and early ventilation are the chief points to be observed.

Planting Vines.—This is the proper time to plant cut-backs, the buds being at the point of breaking. If on turning out the balls any are deficient in roots, reject them, and plant those only which have an abundant root system. Break up the ball and spread out the roots on the border, covering them with 4 inches to 6 inches of soil. Keep the houses close and moist, and the Vines shaded from sun, till established.

Tomatoes.—Seeds may now be sown to produce plants to furnish pits which would otherwise remain untenant during summer. The earliest batch should be ripening; but ours this year have failed, and fruit will not be had till the winter-sown batch is ready. It is a safe plan with Tomatoes to apply water very sparingly till part of the crop is set, and to limit atmospheric humidity at all stages of growth, ventilating as freely as the weather will permit. Rub off all side growths as soon as they appear.

Strawberries.—We usually do not have fruit of much merit till this time onwards. The plants must be very carefully ventilated, and a sharp look-out kept for the earliest appearance of mildew. The ripe and ripening fruit may be preserved considerably longer by shading it from the sun than if unshaded. Later batches need thinning. Give manure-water as required and attention generally as above.

The Vegetable Garden.

Globe Artichokes.—Young stools may now be planted in rows 4 feet apart and 5 feet or 6 feet between the rows.

Cauliflowers.—Autumn-sown plants may now be planted in the open quarters, lifting them with balls of soil and planting very carefully with a trowel. Water may be required once or twice to start them, but only in fine weather.

Mushrooms.—In fine weather admit air to sweeten the atmosphere, and dispense with fire-heat as much as possible. Beds that have been long producing may be benefited by a slight application of superphosphate of lime dissolved in water. Nitrates are supposed to cool the beds. An occasional sprinkling of fine soil over the surface of the beds has an invigorating effect, but, as a rule, new beds give the best results.

Lettuces.—Those raised under glass some time ago are now large enough to transplant. Choose for this batch a warm, sheltered position and pulverise the soil very thoroughly. Try to secure a small ball of soil with each, planting them rather deeply and watering in if the ground inclines to dryness.

Radishes.—Sow often. Earlier sowings have been sown among Carrots and Seakale, but it is now better to keep them separate. No method is better than that of making a small hole for each seed; it takes a little more time to sow them, but a small quantity suffices, and it is certainly worth the trouble.

The Plant-Houses.

Orchids.—This is a suitable time to resurface with sphagnum, and to repot *Cymbidiums* and *Cypripediums* generally.

India-Rubber Plants.—Clean, healthy tops of the common and variegated, if ringed, and a 4-inch pot placed to each with suitable soil, soon emit roots in a hot-house, and should be repotted shortly into 6-inch pots. The last-named requires a high temperature to bring out the variegation.

Strelitzia Reginae.—This strange-looking but handsome plant, if grown in a warm structure, will now be coming into flower, and will require more water at the root; but at no time should it be over-watered. It succeeds in the greenhouse, but does not flower till later in the year. To increase it, divide the plants when growth recommences, saving as many of the fleshy roots as possible. It requires large pots for the size of the plants to do it well.

Tree Ferns.—These are on the move, and it cannot be too well known that to succeed they must be kept very moist, the stems as well as the roots. Some growers swathe the stems in sphagnum moss, but this is not essential where it would prove an eyesore, wetting the stems two or three times a day meeting their requirements. Any requiring repotting or new tubs should be seen to at once, but they can be grown in the same receptacle for many years without shifting.

The Flower Garden.

Phloxes.—Scarce varieties may be increased at this time from selected pieces of the roots.

Forced Narcissi.—These may be usefully employed to brighten dull parts of the grounds, planting them either as they have been grown, in clumps, or singly. If the latter method, let the soil be somewhat dry, when it will be easier to free from the roots without breaking them.

Hollies.—If any of these are to be transplanted, they should be watched so that they may be caught just before the buds break, and transplanted at that stage. Provided the roots are all right, the plants will take hold at once. If the soil is dry, soak with water after planting, and next day cover the wet soil with dry earth.

Roses.—Hybrid Perpetuals, Hybrid Teas and others of the tender sections may now be pruned. The several varieties must be studied as to habit, some requiring very hard pruning, while others may be allowed to grow into bushes. One thing is important for all—to cut out all weak growths and all old growths which are palpably exhausted. Those which have become weak from age may be rejuvenated by cutting close down. A keen frost sometimes shows one the value of hard pruning. Should recently-planted Roses be hard pruned? is not so easily answered. Two beds of Fellenberg planted last November are breaking so strongly that I shall not prune them at all, and expect to obtain plenty of bloom as a reward of forbearance.

R. P. BROTHERSTON.

Tyninghame, Prestonkirk, N.B.

DAFFODIL NOTES.

GOOD FLOWERS AT VINCENT SQUARE,
MARCH 19.

ASI hinted in last week's notes, the present article will mainly deal with the "top spit" of the older varieties exhibited on this particular occasion, together with two or three quite new things which the inelastic columns of *THE GARDEN* precluded mention of before. A group from Mr. A. M. Wilson of Bridgwater has come to be synonymous in the last year or two with a group of novelties and "top spits," and were they hats, I should say they invariably look as if they had just "come out of the band-box." The sea air of Cornwall and Somersetshire acts like a "hot iron" and gives them a polish and a colour which more Midland and Northern growers sigh for in vain.

Take, as an example, Bernardino. It is an exquisitely lovely flower wherever it is grown, but there is a vast difference in the depth of tone between one grown at Whitewell and one at Llanarth. I see from Mr. Wilson's list its retail price is to be £2 for the present season. Although it is so expensive, I have no hesitation in advising a purchase. It has a grand constitution. It is a rapid increaser. It looks important in a garden. It is so *chic* and charming in a room. The widely-expanded ruddy apricot cup and the broadly-segmented white perianth here enter into such perfect combination that something very beautiful indeed is the result. Buttercup, the rich deep yellow Campernelle hybrid, is another plant of the same "all round" class. It is very robust, very free, very offsetty, very sweet and very nice in a vase. It has a good deal of the look of its Jonquil parent in its composition, and is certainly one of the most distinct Daffodils ever raised.

With these I couple *The Fawn*, one of the very best of the giant Leedsis. It is the outcome of a cross between *Minnie Hume* and *Weardale Perfection*, and "it has inherited the substance of the latter." Its measurements are: Diameter of perianth, 4 inches; cup, 1½ inches long by seven-eighths of an inch wide. Its distinguishing features are its great substance and its rather narrow, much-creased pale citron cup. It is of the first water as a garden plant. Another exquisite flower is *Ivory* (perianth, 3 inches; eye, 1½ inches in diameter). The perianth is pure white, with broad, overlapping segments, and, as may be gathered from the measurements, the eye is large, very flat and of the palest lemon, tending towards a faint green in the centre. It is an ideal bloom for a show. A favourite of mine that I was glad to see again was *Beryl*. Its perianth, which is of a pleasing shade of soft yellow, reflexes like that of a *Cyclamen*. This harmonises well with the small bead-like cup of dusky orange. It is a distinct and refined flower. Its parents are *cyclamineus* and a *Poet*. Whelp attracted some attention. It is a large flat flower (perianth, 3½ inches; eye, seven-eighths of an inch), a sort of flattened and glorified *Eyebright*. Its white perianth is good for such an early flower.

Messrs. Barr and Sons exhibited a good many fine things. Michael, to begin with, is a host in itself. As trumpets go it is not over-large (perianth, 3½ inches; trumpet, 1½ inches long by 1½ inches at brim). It is a real rich Guernsey butter yellow self, with a broadly-segmented campanulate perianth and a regular, rather short trumpet,

well turned over at the top. Its value is given to it by the thick, rich-looking, smooth, even texture of the whole flower. There was a splendid bunch of *Lord Kitchener* (perianth, 3½ inches), one of the famous giant Leedsis of Mrs. Backhouse. It has a well-proportioned pale citron cup and a flat, overlapping right-angled perianth. Mr. P. R. Barr told me himself he had never seen better specimens. *Venus* is another of the same class raised by Mr. W. F. M. Copeland. It is a refined, well-proportioned flower, which goes almost white with age. The good opinion that I formed of it last year will be fully confirmed before the season is over. It is worth getting as a show bloom. As an uncommon bit of dainty colouring, the delicately-shaded prawn red cup of *Corallina* was very noticeable. I did not measure *Bedouin*, but it did not appear to be as large as it usually is. This is always a striking flower, with its large orange red cup. It might be described as a *Crown Prince* come to man's estate. A flower that is not new, but which I do not remember seeing before, was *Queen of the North* (perianth, 3½ inches; cup, three-eighths of an inch deep and five-eighths of an inch wide). It has a rounder look than the well-known *White Lady*, and its segments are broader and more overlapping; otherwise it is very much of that type and certainly one of the very best of them. One hardly need describe *Sunrise*. If the pale orange rays on the perianth offend the strict arbitrary eye of the florist, they fascinate those of the people who like charming flowers. Few Daffodils command more general admiration. The deep orange, shallow-shaped cup with its red ornamentation on the margin has just the setting to suit it in the white, palest orange-rayed perianth. *Sunbeam* and *Mohican* both have a great family likeness to it, and no wonder, for all three had their beginning in the same seed-pod. The former is a smaller flower with a decided primrose perianth, while the latter is of a looser build and holds a somewhat similar position to *Sunrise* that *Sirius* does to *Lucifer*. Of the two, *Sunbeam* is my favourite. The majestic *Ajax*, *Cleopatra*, stood out well. It is a real showman's flower, of a softer yellow shade than either *Monarch* or *Lord Roberts*, and it is larger. Neither of these last-named varieties does really well with me, so I am looking forward with considerable interest to the behaviour of the *Egyptian Queen*. As a garden plant to give a bright bit of red colour early in the season I would recommend a trial of *Firelight*. It must be grown in a clump to be seen at its best; then its red and yellow flowers among its blue-green foliage are very attractive.

Robert Sydenham, Limited, had only a small lot, but I thought *Nellie Price*, which was a recent purchase from the *Poet-maker*, a very charming little bloom with an *Almira* look in the perianth and a pale green eye. Green-eyed beauties are quite the rage among the *Poets* now. Messrs. Bath had a few of their own trumpet seedlings and a nice vase or two of that beautifully-formed *Rising Sun*, which is one of the most shapely of the yellow trumpets. I hope the great god size will not cause an eclipse. Never mind, it will not be for always, if it does. *Princess Ena* (perianth, 3½ inches; trumpet, 1½ inches by 1½ inches) looked well. It is a pale bicolor with a long trumpet, which widens out and recurves at the top. The measurements do not give quite a proper idea of the flower. In my own mind I compare it with the better-known *Dorothy Kingsmill*.

I have left Mr. Bourne's collection till the last. He had among his newer things two vases of

Whitewell. This year it comes small and not up to its usual standard. It is a bloom in the way of *Princess Mary*, with a creamy white perianth and a large, much-expanded deep yellow or orange cup. Both as a garden and a show plant it is fine. *Olympia*, which I referred to a fortnight since, is a huge yellow *Ajax*, with a deeper shade of yellow in the trumpet than in its perianth. It is a magnificent plant for pots. *White Sergeant* has a greeny white, slightly campanulate perianth, with a graceful-looking trumpet of a pale primrose shade, recurved at the brim (perianth, 3½ inches; trumpet, 1½ inches long by 1½ inches wide). *Omar Khayyam* is one of the many new *Poets* which, I fear, are getting rather bewildering in their likenesses and their numbers. It is a good flower with a star-shaped, overlapping perianth of much substance and a nice distinct-looking eye. It is obviously a good plant for pots, in that it has that great desideratum of not "quartering" till past middle age, even if it does then.

JOSEPH JACOB

THE HISTORY OF PRIMULA OBCONICA.

IN the current issue of the *Journal of Genetics* an intensely interesting article is contributed by Mr. A. W. Hill, M.A., on the development of *Primula obconica* under cultivation. The history is traced from the finding of the wild plant in China by *Maries* in 1879. The flowers of the wilding were pale lilac, with a yellow eye, and Mr. Hill carefully traces the development from that time up to the present year. The first white flowers were recorded in 1886, and the dark eye, together with the increase in size of the flowers, was observed in the year following. *M. Lille* introduced the *grandiflora* variety in 1892, and fimbriation was first recorded by Mr. J. Crook in 1893. Double flowers were first put on the market in 1901. Herr *Arends* in 1904 created a mild sensation with his strain, to which he gave the name *P. obconica gigantea* syn. *P. Arendsii*, a supposed hybrid between *P. obconica* and *P. megaseæfolia*. The blue form, *P. o. cærulea*, was raised by M. Ferard in 1907, and *Chenies Excelsior*, an alleged hybrid with *P. japonica*, was shown in April, 1911. The article is accompanied by a series of illustrations in colour, showing the various stages of transition. In his concluding remarks, Mr. Hill says: "The evidence which has been adduced in support of theories of hybridisation with other species is not sufficiently confirmed by facts to justify its acceptance." Whether this be the case or not, we are certainly acquainted with at least one plant that was intermediate between *P. obconica* and *P. megaseæfolia*, but as it was no improvement on either alleged parent, it was eventually discarded. There is one point about which we are sure, although it is quite overlooked, viz., to obtain a full yield of fertile seed of *P. obconica*, pollen from the short-styled (thrum-eyed) flower should be transferred to the stigma of the long-styled (pin-eyed) flower, and *vice versa*. As a point of practical importance it might be mentioned that where hand pollination is carried out for the purpose of procuring seed, it is quicker and easier to pollinate pin-eyed flowers from those having protruding anthers, as by this method there is no need to split down the corolla tube for the operation.

One very singular point in the supposed hybridisation of *P. obconica* is that this species is invariably the female parent, and that reciprocal

crosses give no result. It is doubtless with this thought in mind that Mr. Hill sums up with the remark: "In view, however, of certain doubtful points and of some interesting questions as to the influence of foreign pollen in effecting fertilisation, it would seem desirable to suspend full judgment until the results of further careful experiments in the fertilisation of *P. obconica* with foreign pollen have been obtained."

THE ANNUAL SCABIOUS.

AMONG annual flowers, the old-fashioned Scabious still holds an honourable position, and in Northern gardens at least it is regarded as one of the best flowers for garden embellishment and for cutting. The flowers depicted on the coloured cover of this issue represent a modern strain of the annual Scabious, a strain that owes its existence to the efforts of Messrs. Dobbie and Co. of Edinburgh. The flowers are large and full, and the strain embraces many beautiful and unique colours. The cultivation of these plants is very simple indeed. To get an extra early display, seeds are sown in February or early in March under glass; but for all ordinary purposes they may be sown in the open garden during the next week or two. Bees are particularly fond of Scabious, and where the former are kept, these flowers should be grown.

ANSWERS TO CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SCHIZOSTYLIS NOT FLOWERING (C. G.).—It is usual for *Schizostylis coccinea* to flower during the late autumn. Can it be possible that your plants have done so, and that you have missed seeing the flowers? We advise you to place a few plants in a border with rich loamy soil at the foot of a warm wall, with a southern exposure for preference, and keep them well watered during summer. It is possible, if you do this, that flowers will appear next autumn. Your climate ought to suit the plant exactly. We advise that your healthy clump be left in its present position; but be careful to supply it with plenty of water while growth is active.

TAKING CUTTINGS OF ALYSSUM (C. J.).—The shoots of the Alyssum which have grown in the frame will make the best of cuttings. A fairly light soil, such as equal parts of loam and leaf-mould, with about half a part of sand, will make a very suitable compost. Some of it should be passed through a sieve with a quarter of an inch mesh, laying the rough portion on one side. They will do very well in boxes if these are prepared by putting a layer of broken crocks in the bottom, and over it some of the rough soil that did not pass through the sieve. Over this place the fine soil, made level, and press down moderately firm; then dibble the cuttings therein, and settle all in its place with a watering through a fine rose. A very gentle hot-bed will suit them; but if there is too much heat and moisture they are liable to damp off wholesale. Perhaps your warm house will suit them best, especially if a square or two of glass is laid over them to prevent too rapid evaporation. They must, of course, be kept shaded.

DAFFODIL CULTURE (C. W. G.).—You appear to have, so far as the Daffodil is concerned, an almost ideal soil, provided always that its moisture-retaining properties are not calculated to render it close and sticky. The Daffodil being the most important crop, you might proceed with the work of trenching and preparing the ground at once, heavily manuring the land at the same time.

With this done, you might with safety plant the land in August or September next without having previously cropped it, since there is nothing more loved by the Daffodil than a maiden soil of the richness you suggest. Should this meet your requirements, the top spit could be trenched in, to the ultimate benefit of the whole plot and the crops. If, however, you are not prepared to plant in August next, and would prefer to wait another year, you will have to ascertain if your soil is free of wireworm before attempting to crop it with kitchen garden produce. For example, if wireworm abounded in the soil, many crops would be ruined by the pest, and we know of no soil fumigant capable of inflicting a death-blow on this particular pest. Gas-lime is good, but it is obnoxious near dwellings, and, moreover, the land would have to lie fallow for some weeks at least. If, therefore, the pest is present and numerous, the top spit, cut 5 inches or 6 inches deep, should be removed and stacked; or by half burning it, making a fire with wood and small coal, the pest would be destroyed, the soil enriched by the burning, and the land benefited everlastingly by additional drainage and aeration. Hence you will see that what is the right thing to do depends upon circumstances, and these would be best determined on the spot. It may be distinctly pointed out, however, that the Daffodil is not affected by wireworm. If the information here given does not meet the case, you had better get the advice of a specialist, whose fee is often saved a dozen times over by knowledge gained on the spot. Bound volumes of *THE GARDEN* are obtainable from the Publisher, the price of which is 7s. 6d.

TREES AND SHRUBS.

PRUNING COMMON AND PORTUGAL LAURELS (Mrs. H. J. C.).—You cannot do better than prune your Laurels during April, for if the work is done at that time new shoots are soon formed to hide the cuts and furnish the bushes again. If pruning is done in autumn, the plants look ugly for many months, and break again less freely than when pruning is delayed until spring. You may cut the plants well back, especially in the case of the common Laurel, for new shoots will be formed from dormant buds on quite old branches. Should you, however, simply wish to reduce the plants a little, draw out the longer shoots, taking care to cut them back to a side branch. This will leave the bushes without any appearance of stiffness.

SHRUB FOR NAME AND TREATMENT (M. C. S.).—The specimen sent is *Prunus triloba*, a member of the Plum family. It is largely employed for forcing, as, apart from the members that are grown in this country, immense numbers are sent here from Belgium and Holland during the autumn months. The reason of your plant not flowering is undoubtedly starvation; therefore we should advise you to shift it into a 7-inch pot at once, using good loamy soil. Then, when the cold weather of spring is over, plunge it out of doors in an open sunny spot, taking care that it is regularly supplied with water. As the pot gets full of roots, an occasional dose of liquid manure will be helpful. This *Prunus* also makes a delightful wall shrub, and in this way it will mount up to a height of 10 feet or 12 feet and flower profusely.

AUCUBA SEED NOT GERMINATING (J. R. N.).—Providing the seeds of *Aucuba japonica* are perfect and fully matured in every way, there ought to be no difficulty in raising plants from them, supposing they are sown when ripe, say, in February or March, in light, well-drained, loamy soil, either out of doors or in pots. It may be, however, that your fruits have swollen to the normal size without the flowers ever having been properly pollinated; therefore the seeds may not be fertile. This may be noticed in many kinds of fruits and seeds. If you place pollen on the stigmas of the female flowers with a camel-hair brush, or by some other agency, you ought to secure fertile seeds. Should you only wish to increase your stock of *Aucubas*, it may be easily done by layering the lower branches, or by cuttings taken off during spring or summer and placed in sandy soil in a close frame until rooted.

A NEGLECTED SHRUBBERY (C. B. B.).—We are afraid that you will not find it a very satisfactory matter to top-dress the ground you speak about with artificial manure, for the roots of the stronger-growing trees will take the nutriment which you wish to go to the shrubs. You might, however, try a light dressing of guano about established shrubs, but not about those which are newly planted. Failing guano, you might try bone-meal. A better plan would be to take the shrubbery in sections, clear out all the rubbishy plants, trench the ground, cut out roots, where such a thing will not seriously interfere with the health of the trees, add a proportion of better soil to the ground, and plant again with shrubs suitable for the position. This creates more work in the first place, but the results will be far and away more satisfactory than treating the ground as you suggest. If you can obtain good soil to add to the ground, use it in preference to manure. In the event of having to fall back on manure, however, only use that which is thoroughly rotted, and take care that it does not come in contact with the roots of newly-planted shrubs.

SPREADING PLANTS FOR A GRASSY SLOPE (C. E. M. L.).—The following plants are likely to succeed under the conditions you describe: *Vincetoxicum*, *Cotoneaster microphylla*, *C. horizontalis*, *Juniperus Sabina* variety *prostrata*, *Hypericum calycinum*, *Santolina*, *Chamaecyparissus*, *Helianthemum* in variety, French Gorse (*Ulex Gallii*), and dwarf Lavender. You could make the bank very effective by planting it entirely with different varieties of Rock Rose or *Helianthemum*, or with a mixture of *Helianthemum* and *Cistus*. The following kinds would

be a good selection: *Helianthemum vulgare* vars. *Fireball*, *Magenta Queen*, *alba*, *croceum*, *cupreum*, *mutabile*, *rhodanthum*, *roseum* and *venustum*, *H. formosum* and *H. polifolium*; *Cistus corbarianensis*, *C. florentinus*, *C. lusitanicus* and *C. monspeliensis*. All these would need to be obtained in pots. No special preparation of the ground would be required, for they thrive in poor, dry soil, spreading rapidly enough to soon cover a considerable area. If you prefer a mixture of subjects, be careful to plant each kind in an irregular-shaped mass, so that no suspicion of formality will be noticed when finished.

KITCHEN GARDEN.

HOW TO PLANT WATERCRESS (C. B.).—Instead of sowing seeds you would be well advised to buy a few bunches of Watercress and insert the shoots in the form of cuttings. Usually there are young roots commencing to grow from the stems of the cut Watercress, and so propagation is easily effected. You do not say where you wish to grow the plants. If in a stream, the cuttings must be inserted in some good loam placed just at the edge of the running water, so that it will be constantly soaked through. In due time the plants will spread very freely, covering both sides of the stream; and if the latter be shallow, about four inches deep, with a gravelly bottom, the plants will grow in the water itself. If you intend to grow the plants in borders, propagate cuttings early in September, inserting them fairly close together in sand in pans, and maintain the sand in a very wet state. In the meantime make a broad trench nearly one foot deep in a cool, shady border, mix some sand and rotted manure with the ordinary soil, and water to make a puddle; then cover the surface with coarse sand, 3 inches deep, put in the rooted cuttings, and keep the soil always very moist.

TIMES TO SOW VEGETABLE SEEDS (A. S.).—Peas.—Sow *Excelstor* at once and *Beautiful* and *Centenary* a fortnight later. On May 1 sow *Imperial Debauchee*, and *Abundance* a fortnight later, say, the 15th, reserving *Royal Jubilee* for the last sowing at the end of the first week in June. The Peas sown on and after April 19 should be sown in manured trenches like *Celery*. They will then withstand drought and mildew in hot weather, and give much heavier crops. The rows should be planted 4 yards apart. They do much better in this way than when planted closer together. The ground between can be cropped with other low-growing vegetables. Sow seeds of all vegetables thinly. Broad Beans and Brussels Sprouts sow now. *Celery*.—Sow now in fine soil in a box under a glass frame. *Cucumber*.—Sow now in frame on hot-bed. *Leek*.—Sow now and replant later. *Lettuce*.—Both *Cos* and *Cabbage* sow now and every three weeks for succession until the end of July. For autumn and winter supply sow on August 12. *Carrots*.—Sow in warm border now; larger sorts a fortnight later. *Cauliflowers*.—Sow at once and every three weeks until the middle of July. Sow again on August 16. Protect these plants in frames to plant out in spring. *Broccoli*.—Sow *Michaelmas White Protecting*, *Early White* and *Snow's Winter White* now, also *Prefecture*, *Purple Sprouting* and the other late ones. *Spinach*.—Sow now and every three weeks until the middle of July. On August 16 a large sowing should be made for autumn and winter supply. *Tomatoes*.—Sow now in pots under glass and plant out of doors at the end of May; or the first week in June, according to the weather. *Turnips*.—Sow a few seeds on a warm border at once, and then at intervals of three weeks until the end of July. On August 12 sow a large breadth for autumn and winter supply. *Savoy*, *Kale* and winter greens.—Sow now. *French Beans*.—Sow the first crop on a warm border at the end of April, and successively every three weeks until the middle of June. *Scarlet Runners*.—Sow the first week in May in manured trenches as for *Celery*. *Beetroot*.—Sow May 1. *Mustard and Cress*.—Sow now in a warm border, and for succession every week through the summer. *Endive*.—Sow now for an early supply, and at the end of April for an autumn and winter supply. *Vegetable Marrow*.—Sow in pots in a frame now, and plant out of doors the end of May (according to weather). *Parsnips*.—Sow these as soon as possible. *Radish*.—Sow now in rich soil and every fortnight afterwards during summer. For autumn and winter supply sow August 16. *Onions*.—Sow now.

THE GREENHOUSE.

AZALEA BUDS DROPPING (B. M. B.).—There are several items which may cause the buds of *Azalea mollis* to drop just before they open. In the first place, this is very likely to happen if the plants are potted up only just before they are taken into the greenhouse; next, they may have been allowed to get too dry (perhaps before they were potted), or kept too saturated. An excess of atmospheric moisture collecting at the base of the bud would also cause the flower-stems to decay. With careful attention *Azalea mollis* may be forced two years running, though it is generally preferred to force the plants only in alternate years. When forced annually it is most essential that they be well cared for after flowering; that is to say, when the blossoms are past, the plants must be kept under glass and be well supplied with water. As the leaves produced under such conditions are tender, the plants must not be stood out of doors till the cold weather is quite past. An occasional dose of liquid manure when they are making their growth is very beneficial to these *Azaleas*. During the summer they should be stood out of doors in a spot fully exposed to sun and air, in order to set their buds for another season. It is very necessary that they be kept well supplied with water at all times, but especially during the spring and summer.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The White Hollow-rooted Fumitory.—The white variety of *Corydalis cava* is highly pleasing in the garden at the present time, and in no part is it more beautiful than on a flat place on the top of a low retaining wall supporting a bank of soil and in partial shade. It is about five feet above the ground-level, this height showing the pretty white flowers much better than when on the flat. It will not, however, do on the top of an ordinary wall unless it has a few inches of soil.

Trial of Violas at Wisley.—The President and Council of the Royal Horticultural Society have arranged for a trial of Violas to be conducted at the Wisley Gardens during the season of 1912. It is hoped that a large number of varieties will be sent to the Superintendent, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey, for this purpose, so that the trial of so important and popular a flower may be made as useful as possible. Six plants of each variety should be sent at once.

Primula viscosa Hybrids.—One of the most interesting exhibits at the Royal Horticultural Society's exhibition held on the 2nd inst. was a small group of hybrids of *Primula viscosa*. These were shown by Miss Willmott of Warley Place, Brentwood, Essex. There was a great deal of variation in the colour and form of the flowers, as well as in the habits of the plants, ranging from the type to almost garden Auriculas. One plant with large trusses of well-developed flowers of a pale rose lilac hue was particularly attractive, and was, apparently, the result of a cross between a garden Auricula and *Primula viscosa*. Evidently the hybridisation of many of our hardy flowers is as yet in its infancy, and it is well within the bounds of possibility that even more beautiful and interesting results will be obtained with *Primula*s and other plants in the near future.

The Best Potatoes.—The joint report of field experiments in Staffordshire and Shropshire and at the Harper Adams Agricultural College, Newport, Salop, for 1911, just published, contains some interesting particulars of trials of varieties of Potatoes. These trials were conducted in a field of sandy soil, sprouted sets being used. The land was manured with farmyard manure, eight tons per acre, presumably ploughed in during the autumn, supplemented by 3cwt. of superphosphate, 3cwt. of kainit and half a hundredweight of nitrate of soda, these being applied at the time of planting on April 25. Not less than a quarter of a square rod of each variety was grown. Owing to the drought, all the crops were light; but we name in order of merit the four that gave the heaviest total crop in each section. Early: Duke of York, Midlothian Early, Harbinger and Sharpe's Victor.

Second early: Russet Queen, Radium, Aberlady Early and Colleen. Maincrop: Eastern Planet, Goldfinder, Provost and White City. An experiment was also conducted to compare the value of winter applications of farmyard manure with manuring in the drills at the time of planting, the result being in favour of autumn manuring.

A Rock Garden Rhododendron.—A dainty little Chinese species eminently fitted for the rock garden is *Rhododendron intricatum*. When quite small the plants flower freely, being nicely covered with small, compact trusses of the lavender blue blossoms. These are not more than half an inch across. Mr. E. H. Wilson describes the plant in a wild state as a low, densely-branched evergreen species 1 foot to 3 feet in height. Cuttings root readily in a slightly-heated propagating-frame in August.

The Weeping Japanese Cherry.—This interesting and distinct Cherry flowers in March about the same time as the Almonds. Owing to its weeping habit, the plants are seen to the best advantage when grafted on stems 6 feet or more in height. For sheltered sunny borders and the formal garden this Cherry is seen to great advantage. The specimen which suggested this note is some six feet high, with quite a formal flat top, all the branches being at first horizontal, then quite pendulous. Every twig about the middle of March was laden with the delicate rose-tinted blossoms. The tree is appropriately named *Prunus pendula*.

Stag's-Horn Ferns at Glasgow.—There is an unusually good collection of Stag's-horn Ferns in the Botanic Gardens, Glasgow. Mr. James Whitton, the curator, has a liking for plants of this class, as he has, indeed, for plants of almost any kind. The popular *P. Alcorni*, the common Elk's-horn Fern, is well done; but *P. grande* is the great favourite with those who see the collection.

The Double-Flowered Blackthorn.—This is a shrub which is rarely planted, yet it has much in its favour, for it is certainly one of the most showy of the dwarfier Plums. Of dense habit, it may be grown as a bush 5 feet or 6 feet high, or it may be grafted on a Plum stock 5 feet or 6 feet in height, and so form a small bushy-headed tree. In either case it develops a thicket of rather stunted, somewhat spiny branches after the manner of the type, and the double white flowers are borne with the greatest freedom about the end of March and the early part of April. Although quite showy enough to grow as a specimen bush, it is an excellent shrub to use for a group in the wild garden, its usefulness for this purpose being added to by the fact that it is not very fastidious regarding soil, although that of a loamy character suits it best. As a companion to the double-flowered Gorse it would be excellent for clothing dry banks.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Rose-Coloured Pasque-flower.—I was surprised that this distinct and charming form of the Pasque-flower alluded to in THE GARDEN for March 30, page 153, as having been exhibited at the meeting of the Royal Horticultural Society on March 19 did not gain an award of merit, especially as the floral committee bestowed awards with a rather lavish hand on that day. At all events, there is, I should say, not much doubt that, should it be again exhibited, it will gain the honour of an award, as it is so distinct from the type and of such a pleasing shade of colour.—H. P.

Carmichaelia australis in South-West Scotland.—This handsome plant thrives well in the mild South-West of Scotland, and a very large specimen is to be seen in one of the prettiest of the Kirkcudbrightshire gardens. It has been in its present position in the rock garden for a number of years, and never fails to flower with great freedom and to increase in size annually. The garden in which it is cultivated is quite near the Solway, and the influence of the Gulf Stream, a part of which is said to enter that frith, is highly beneficial to many reputedly tender shrubs and other plants. Its handsome lilac flowers, borne here in the greatest plenty, are admirable when the plant thrives as it does in this favoured South of Scotland garden.—R. A.

Saintpaulia ionantha.—I think this little plant is not so popular as it was soon after its introduction. If I am correct, it is unfortunate that there should be any falling off in the favour with which it was received. It is so easily raised from seeds, treated in the same way as those of the Begonia and sown in March, that no one who has a stove need be without this charming Saintpaulia. Its flowers are almost like those of the Violet in general effect, although the plant is one of the Gesnerads, of a genus of which it is the sole member. It requires stove treatment, and can be had in bloom all the winter; in fact, practically almost all the year. It is now varied in its coloration, but the prevailing tints are of a deep blue and purple blue. The white variety is very pretty, and there is also a rose-coloured one seldom met with.—A. M. D.

A Dwarf Azalea.—Azalea Hexe, a pretty, small-growing form of the Indian Azalea, furnishes a good illustration of the fact that a plant may remain more or less in a state of comparative obscurity for years, and then rapidly bound into popularity. It was raised over thirty years ago by the late Mr. Otto Forster, and resulted from crossing the then well-known variety of Indian Azalea, Duc de Nassau, with pollen from a good form of Azalea amoena. After it got into cultivation I often saw this variety grafted on to stems about a foot high, a practice generally followed by the Belgian cultivators with Indian Azaleas. In this way A. Hexe attracted no special attention until it struck someone to grow it as dwarf, bushy plants on its own roots, and, so grown in comparatively small pots, it caught on. Now it is extensively cultivated and meets with a ready sale. The flowers, which have the hose-in-hose character common to the best forms of Azalea amoena, but are larger than those of that well-known kind, are of a bright crimson-carmine

colour. It can be readily struck from cuttings, and the plants that one may now frequently see in the florists' shops are obtained in this way.—G. R. M.

The London Daffodil Show.—I am wondering whence, in any case Southwards, are to come the flowers for competition in the Royal Horticultural Society's exhibition so late as the third week in April, when the great mass of the varieties have been at their best during the last week in March, just three weeks earlier. Most certainly all varieties have been abnormally early this year, due, no doubt, to two causes—exceptionally hard ripening or maturing of the bulbs last summer, and a very prolonged open growing autumn allied to a relatively mild winter. Unless there will be plenty of flowers in the North so late as the 16th, it is difficult to see whence flowers in the many classes will come. Daffodils cannot well be kept back once in bloom. That the show seems to be far too late for the season cannot be blamed on anyone, as the selection of the date was made by the Daffodil committee, which includes all the experts, who, of course, should know, and who were guided by previous experience.—A. D.

Another Rare Indian Lily.—In the issue of THE GARDEN for March 30, page 158, there is an illustration of Liliun roseum, a strange and uncommon Lily from the Himalayas; and quite recently, in a notice of L. neilgherrense, the writer referred to its extreme scarcity at the present day compared with a generation ago. There is, moreover, another Lily, native of the same region, of which in the eighties I used to receive a few bulbs from two or three correspondents, but which now seems to be almost, if not quite, unknown. I allude to L. polyphyllum, which is singular in being the only Indian member of the Martagon group. The bulbs are long and narrow, a good deal after the manner of the Siberian L. tenuifolium, but even longer in proportion to their width. The flower-stems reach a height of about a couple of feet. The flower segments are less reflexed than in most of the Martagons, but, still, the blossoms are very beautiful and distinct. They are of a yellowish cream tint, marked inside with short purple lines. I could only grow it under greenhouse treatment, and then very few of the bulbs flowered a second time.—J. P.

Colour-Schemes for Flower-Beds.—May I point out to "A. D.," whose note appears on page 154, March 30, that the Canterbury Bell and Sweet William combination, described on page 130, March 16, was put forward because of its unique effect rather than as an arrangement that would extend throughout the summer, also that we do grow successional (or rotation) plants to follow the shorter-lived flowering plants. We usually follow with Antirrhinums, Asters, dwarf Nasturtiums and similar plants; but I did not trouble to mention this in the note referred to, as my object was to elicit from other readers any really good arrangement out of the general order of bedding or planting. Two plants mentioned by "A. D."—Larkspurs and Nigella—are most unsatisfactory on our heavy soil; in fact, many gardeners complain of the way in which the former dies off, however treated. I do not think we should slight or miss certain bedding arrangements simply because they will not last from spring or early summer until the frosts begin. The evanescent nature of an arrangement may be more than compensated for by its unusual and superior effect. Sometimes we grow a long

border of Spanish Iris, and what is more lovely? But halfway through the summer they have to be replaced by a batch of something else.—C. TURNER.

The Valdivian Wood Sorrel.—In Oxalis valdiviana we have one of the most accommodating of the Wood Sorrels, albeit it is one which cannot be considered a true perennial in our gardens, our winters bringing with them too many trials for this native of a warmer clime, and we have to depend upon its offspring to perpetuate the plant in our gardens. This is usually quite easy, as it sows itself freely enough to maintain the succession and to give us pleasure for many years. O. valdiviana is a pleasing Oxalis, with neat leaves and good yellow flowers, which, like those of others of the race, close in dull weather and at the approach of night. In some respects this may be a disadvantage, but this habit has the result of prolonging the beauty of each individual bloom, and therefore of the whole plant. O. valdiviana evidently likes a light soil, and is an excellent plant for the rockery or wall garden. It grows from 6 inches to 9 inches or 10 inches high, as a rule. Seeds can be sown where they are to bloom in March or April in the open, and will flower the same season.—S. A.

Apple Trees in Grassland.—Although I am far from favouring the growing of Apple trees in grassland, I could but think that, however strongly one might object to the practice, the selection of Apple trees for illustration as presented on page 155 was not quite fair. Here it was evident that the most robust-grown tree in the one case was presented for comparison with one of the worst in the other case. No. 1 tree, so robust and full of wood, resembles a well-grown tree of Annie Elizabeth, but has been allowed to make far too much wood, which, as the illustration shows, is deficient in fruit-buds. Such a tree, even if the head be occasionally thinned, would probably go on being sterile for years. With the surface soil manured, ploughed and cropped with roots or something else, what wonder if trees so treated have made strong, deep roots, which need hard severance to cause the trees to carry crops! I have seen Annie Elizabeth on grass making fine trees and carrying really splendid crops year after year at Sherborne; hence, whether we may dislike the practice or not, common justice compels us to admit that its condemnation cannot be admitted from one case only. What grand bush trees and superb fruits Mr. J. Hudson gets from his breadth on grass at Gunnersbury, the grass growing up 2 feet in height each year before it is mown. Several years ago I was invited by Mr. W. Crump, V.M.H., of Madresfield Court Gardens, to go there and act as a judge of a fruit tree pruning competition, which is held annually on the estate. We went out to a grass orchard several miles distant and found the trees and the competitors. Each man was allotted three trees, which he was to prune to the best of his ability in two and a-half hours. Much of the work was well done, but there was the fact that there were scores of standard trees on grass twelve years planted in fine health, full of growth and badly needing head thinning. Many of the trees much more nearly resembled No. 1, while there was not a tree of the whole lot so poor as the No. 2 illustrated. This is a further example of the fact that there are conditions doubtless due to excellence of soil, in which Apple trees will do well and are clean and productive on grassland.—A. D.

A Beautiful New Saxifrage.—Probably we shall soon see and hear a good deal of one of the finest of the true Aizoon Saxifrages, *S. Aizoon Rex*, which is a very rare form. It is one of the most prized of all the finds of Mr. Reginald Farrer, who tells us that he found it on "a precipitous, unprolific shale-slope below the Tossenhorn." Mr. Farrer calls it his "dearest pride," and although we outsiders can hardly enter fully into the feelings of the discoverer towards his findling, we can see enough beauty in it to sound its praises enthusiastically. It has handsome, shapely, attractive rosettes of the real Aizoon form; it is a splendid doer; it has elegantly-borne flowers of an unsullied white, and these are elevated on lovely stems of a kind of carmine red. Silvery Saxifrages are superabundant in variety, but *S. Aizoon Rex* will hold its own.—S. ARNOTT.

Acacia dealbata Outdoors.—As an old subscriber to *THE GARDEN*, I thought it might interest you and readers to hear of a plant of *Acacia dealbata* growing in my garden here. I obtained the plant from Cannes in the year 1903, quite a small one, and planted it out as soon as I got it, and it has grown rapidly ever since. It is now a tree quite 25 feet in height and about twenty-seven feet through, and has been one sheet of blossom since the middle of February. The stem 1 foot from the ground measures 2 feet 11 inches in circumference. Frost does not seem to affect it at all. We had a week in January with 6° to 8° of frost every night. I send a photograph which shows the size of the tree. It has bloomed here every year, but this year it came into bloom quite a month earlier than usual and flowered much more profusely, which I attribute to the very warm summer of last year.—LEWIS RIALI, *Old Conna Hill, Bray, County Wicklow*. [The flowers on this splendid plant, owing to their yellow colour, do not show in the reproduction, but were just discernible in the photograph and bore out our correspondent's statements.—ED.]

Tree Ferns at Glasgow.—It is a common remark among visitors to Glasgow that they have never seen a more natural-looking group than that of the Tree Ferns in the Kibble Palace of the Botanic Gardens there. They are grouped in a most artistic and natural manner in the centre, and it is not difficult when looking across the house to imagine one's self in the native home of these magnificent Dicksonias and other Tree Ferns in their native Australia. The great size of the Kibble Palace has enabled the group to be arranged in a full and effective way, and Mr. Whitton, the curator of the gardens and superintendent of the Glasgow parks, has taken full advantage of the space available. Those who have not visited the place for a number of years, and who remember it in its old condition, are amazed and delighted at this group and the improvement it has effected in the large glass structure. The Ferns are of great size, well grown, and thrive wonderfully in what cannot but be an impure atmosphere, as Glasgow air is laden with chemicals.—A. M. D.

A Neglected Coleus.—The beautiful cobalt blue flowered *Coleus thyrsoideus* is such a universal favourite that any other member of the family that does not reach its standard is apt to be passed by. This must be the reason that we see so little of *Coleus shirensis*, a Central African species, introduced about ten years ago. It is a far sturdier grower than *C. thyrsoideus*, and forms a more shapely bush. The leaves, which are about six inches long and four inches wide, have, when rubbed, a distinct perfume, somewhat as in the old *C. aromaticus*. The erect flower-spikes are 6 inches to 8 inches in length, and are made up of a large number of blossoms. The upper part of the flower is a kind of light bluish violet, the lower portion being of a much deeper tint. This *Coleus*

THE KITCHEN GARDEN.

SWEDE TURNIPS FOR GARDENS.

THE Swede Turnip that is grown in gardens must not be classed with the ordinary field Swede, as it is much superior in every respect. Both the white and yellow kinds are remarkably hardy, and on this account specially good for winter supplies. The plant is admirably adapted for strong or heavy soils and poor land, though, of course, it well repays good culture in the shape of well-tilled soil and an open position.

Where Turnips Fail.—The garden Swedes will thrive where Turnips fail. They are more hardy,



ACACIA DEALBATA GROWING IN THE OPEN AT OLD CONNA HILL, BRAY, COUNTY WICKLOW.

will flower during the winter in an intermediate house while in spring the greenhouse will suit it.—H. P.

FORTHCOMING EVENTS.

April 16.—Royal Horticultural Society's Exhibition and Daffodil Show (two days) at Vincent Square, Westminster. Lecture by Professor Henslow on "Darwin as Ecologist." Shropshire Horticultural Society's Spring Show at Shrewsbury.

April 17.—Royal Horticultural Society's Examination for School Teachers and Allotment Gardeners. Devon Daffodil Show at Plymouth (two days). Royal Horticultural Society of Ireland Spring Show (two days).

April 18.—Ipswich and East of England Spring Show. Linnean Society Meeting. Manchester Orchid Society Meeting. Huntingdon Daffodil Show.

and therefore greatly prolong the supply of roots at a difficult season. The culture is simple, being much the same as for Turnips. The Sutton White is very good, a short-topped, well-shaped root and free from coarseness. The Crimson Topped is also a distinct root, with yellow flesh, and for late winter supplies is an excellent vegetable.

Time to Sow.—Being a distinct winter vegetable, diverse culture is advised. I do not recommend them for summer use, and as regards time to sow, so much depends upon locality. In the Southern Counties, June would be quite early enough to sow for a winter crop; indeed, on light soil in the South, to get as late a supply as possible I have sown early in July, as large roots were not required. At the same time, May and June are the most suitable months, and then a fair season's growth is secured. Give deeply-dug land and avoid rank

manures; indeed, land that was well manured for a previous crop will be best. Sow in rows 15 inches apart, or even more if room is plentiful, and thin to half the distance between the plants.

At the approach of winter the plants do well with some soil drawn up over the roots, though they are quite hardy. This prevents the larger roots splitting; or, if desired, the roots may be clamped or placed in a cold store. They will keep solid till the spring if treated thus, and are then more readily got at in severe weather.

G. WYTHES.

WAXPOD OR BUTTER BEANS.

I do not think these Beans attain the amount of appreciation they really deserve. The pods when gathered young and cooked whole are exceptionally tender and delicious. It may be that the golden colour is not so pleasing to some as the green, but for tenderness I think nothing more could possibly be desired. The dwarf varieties are numerous, yet only about two or three are catalogued, which are probably enough, as it is not necessary to grow for the sake of variety. I find Mont d'Or very good, both for earliness and productiveness, while the quality is excellent. The Tall or Climbing Waxpod of the same name is probably one of the best of its class for earliness and productiveness, and if the season proves warm, the plants grow and set the pods very freely. I have grown these two for several years and am well satisfied with both, and can strongly recommend them where these Beans are to be given a trial. I do not know how far North they will succeed, but I am under the impression they are more tender than the green-podded varieties. Both delight in a deep, well-cultivated soil of rather a light texture, and in dry weather the roots need to be well watered. The pods set more freely if the plants are lightly syringed after a hot day.

H. MARKHAM.

Wrotham Park Gardens, Barnet.

ROSE GARDEN.

PERPETUAL-FLOWERING CLIMBING ROSES.

ONE cannot well over-estimate the value of such Roses at the present time. We are inundated with ramblers. Far too many are introduced that are of little, if any, value, and many are absolutely no improvement upon what we already possess. But when a perpetual-flowering variety is introduced, we must certainly give it a trial.

I imagine the Climbing Mrs. Cutbush will be a Rose that everybody will want to possess. It gives a fine show of bloom and produces splendid growths, as much as 7 feet in a season. As a pillar

Rose such a novelty will be very welcome indeed, also for clothing the uprights of a pergola.

Herr Peter Lambert, who has done so much to add beauty to our Rose gardens by his many splendid introductions, is sending out this year one named Hauff, which, he says, is perpetual-flowering from the second year, and as it is a descendant from Aimée Vibert crossed with Crimson Rambler, it certainly should be a good thing. Its colour is violet purple, a shade of colour scarcely tolerated among show blooms, but in a rambler certainly a novelty worth adding. Both with this variety and Veilchenblau it needs great taste in colour arrangement to properly place them. I should say between creams or whites they would show up grandly.



THE NEW HYBRID TEA ROSE, ROSE QUEEN.

Jean Grim is a variety that I think will be a favourite. It is one that flowers from June until November, and bears large trusses of vivid pink flowers which have a rosy white centre. This variety received a first-class certificate at Lyons. Sylvia is a great advance. It is not only perpetual-flowering, but possesses the lovely foliage of the wichuraianas and also a delicious fragrance. Its colouring is creamy white, and the flowers are large for its class.

I expect we shall soon have some additions to these perpetual-flowering Roses raised from Trier, the very lovely perpetual semi-climber, as I know some hybridists are working upon this variety. Their usefulness will be more in the form of big bushes rather than climbers, but there is room for such Roses. When planters are fully alive to the possibilities obtainable by planting out such Roses singly, or even as shrubs grouped with other subjects, they will be wanted, although I should prefer to see them isolated upon lawns, where they can have plenty of space for development. In the large gardens that abound all over the country there are plenty of spaces that could be allocated to such Roses, and even in the bulb garden quite a number could be planted, because one might surround them with Narcissus or other bulbs without detriment to either.

There are some interesting sports, too, among the Hybrid Teas — climbing sports I mean, such as Climbing Killarney, Climbing Mme. Jules Grolez and Climbing Lady Ashtown—that will be of great usefulness and able to be used in a variety of ways. I am planting these and Roses of the type of Florence Haswell Veitch, Beauté de Lyon and Juliet upon a bank many yards in length. The hedge of White-thorn has been cut down to the ground and large holes have been dug out and enriched with manure, so that I hope to have a really fine show of big bushes in a year or two. I have already huge bushes some 7 feet high and as much through of Nova Zembla and Conrad F. Meyer, and what is possible with these will be possible in perhaps a lesser degree with the Roses named; in fact, there are so many grand sorts now of such marvellous vigour that it seems incumbent upon one to grow them all, even if one's collection is increased to an alarming extent. I see no objection to having a few even in the herbaceous borders, planted of course, among low-growing subjects, such as the Geums Achilleas and the like.

P.

A NEW FORCING ROSE.

THE forced flowers of the new Hybrid Tea Rose, Rose Queen, as shown before the Royal Horticultural Society a few weeks ago, establish beyond doubt that the new-comer is likely to prove of great value for early work. It is an American seedling introduced by Mr. W. E. Wallace of Eaton Bray, who secured an award of merit for this sterling novelty on making its debut in this country. As previously described in our columns, the shapely flowers are of the Lady Ashtown build and character, with possibly somewhat the colour tone of Caroline Testout. As a forcing variety it is not likely to clash with any existing sort, and there is every reason to assume that it will become popular in the near future.

THE FLOWER GARDEN.**SWEET PEA NOTES.**

Planting Out.—How many scores of thousands of Sweet Peas raised from seeds sown in pots or boxes in the autumn or spring have already been planted out in gardens in various parts of the country? How many scores of thousands still remain in pots and boxes for planting out? I should greatly like to have answers to these questions, but doubt the possibility of securing them. I am quite sure that the total number would come as a surprise even to those who are best qualified to judge of the popularity to which the Queen of Annuals has now attained. The answer would represent several hundredweights of seeds, and it needs but a simple problem of arithmetic to prove that such will spell hundreds of thousands of seeds. Let us hope that the present wave of prosperity will continue long to flow.

Last season there were two things which might militate against unceasing and increasing popularity. The first was the terrible weather

they would never grow Sweet Peas any more owing to the failure mentioned. Well, I am sorry, of course; but those who fail to rise from the first blow must be pretty thin-blooded, and the cult will not, therefore, lose much because they do not become adherents.

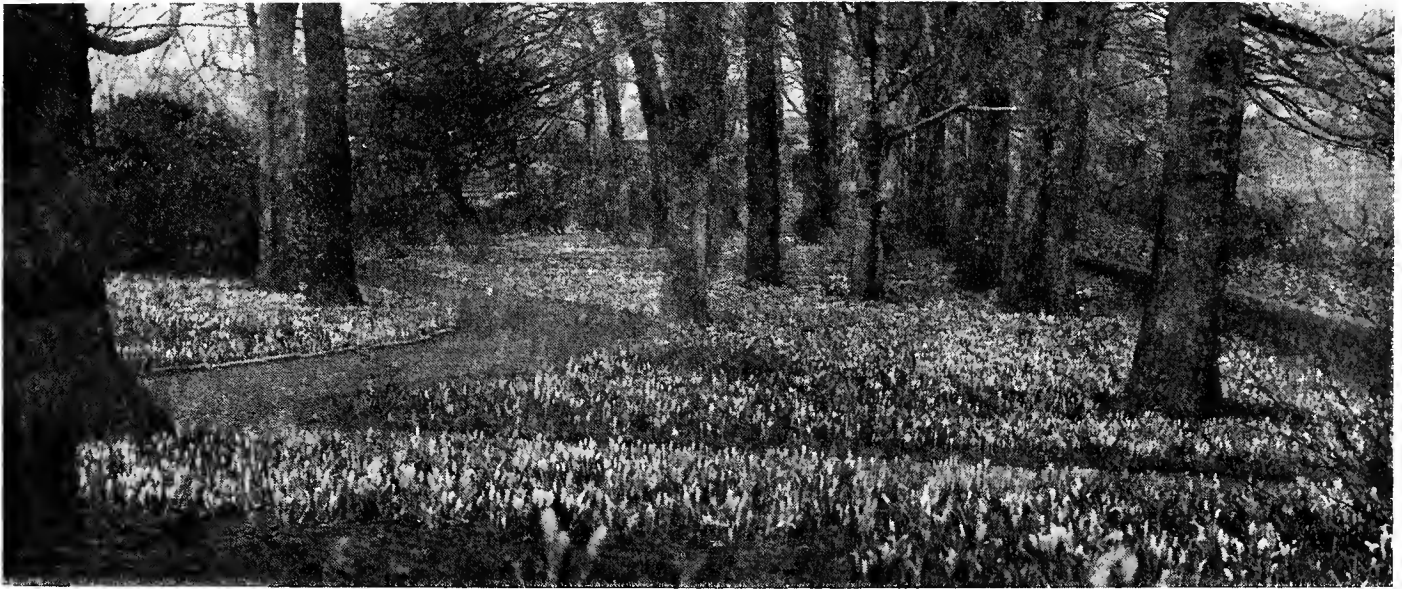
The preventive of yellowing, in many instances, is to plant clean, healthy plants in sweet, friable, rationally-prepared ground, and this is the task that should be accomplished forthwith. Weak, spindly specimens which have been coddled feel the check of moving, and are thus predisposed to receive the worst effects of any trouble which may happen to come along. Strong, sturdy, hardy plants never stop their forward progress, and in their stout tissues they possess an undoubted natural power to throw off all except the most serious attacks.

The soil will, of course, have been prepared long ago, or it should have been, and the planting alone has to be done. Plants from 6-inch pots demand a great depth of friable mould, because the roots are long and numerous; those from 3-inch pots should have an equal depth, but the

such a gorgeous display of Crocuses as that shown in the accompanying illustration. This has been prepared from a photograph taken and kindly sent to us by Mrs. Gordon, Potternewton House, Leeds. In a letter which accompanied the photograph Mrs. Gordon mentioned that the grounds are within two miles of the centre of the City of Leeds. We welcome photographs of all kinds from our readers, as any which are suitable for reproduction enable us to record beautiful effects that would otherwise pass unnoticed.

HARDY BORDER AURICULAS.

I HAVE been mentally comparing the aims of the Daffodil-growers, as presented in the schedule of classes prepared by them and adopted by the Royal Horticultural Society for competition on the 16th inst., with that of the National Auricula Society as seen in its schedules of classes for these particular flowers in past years. Daffodils are at this time of year and later such universal outdoor or garden flowers that only from such sources can the flowers exhibited come. Thus the classes



A WOODLAND SCENE IN SPRING: CROCUSES AT POTTERNEWTON HOUSE, LEEDS.

which we experienced in practically all parts of the kingdom shortly after the over-eager had put his plants into their permanent positions. I do not, however, fear much from this, since losses due to such a cause are so easily preventable, and it is reasonable to assume that the man who has been severely hit will take excellent care that a similar happening shall not occur again from the same cause. The second trouble, and it is to be feared the more serious, was the immense number of plants which attained to a stature of 3 feet or thereabouts, yellowed and died without having given a single picking of flowers. The tyro who is just crossing the threshold of the cult and has not yet drunk to the full of its many pleasures will not stand many blows like that, and I sincerely hope that the season upon which we are now entering will not be so fruitful of disasters. I heard of many, and met a few, persons who were slightly bitten by the fever—due originally, perhaps, to the fact that they thought they had a chance of annexing one of the many splendid prizes being offered—who had said that

immediate necessity for it is not so apparent owing to the much shorter and more curled character of the roots. It is often a source of worry to amateurs to know whether to shake out the roots or not. They fear that if they do so a check will ensue, and possibly they have been told that if they do not do so the roots will never satisfactorily ramify from the ball in which they come out of the pot. To the first point it will suffice to say that, properly handled and managed, there will not be the slightest cessation of advance; while to the latter point it may be said that the fault is with the cultivator, who should not have allowed them to come to such a state; but, seeing that it prevails, by all means shake them out or loosen in some way, or it is hopeless to anticipate the finest results.

HORACE J. WRIGHT.

CROCUSES IN THE WOODLAND.

On several occasions we have referred to the beautiful effects obtainable by the free use of Crocuses and other spring flowers in grassland and woodland. We do not, however, ever remember seeing

are literally open for competition to all who have gardens, however small, and who grow but a few Daffodils. Really they are presented as garden decorative flowers; hence interest in them as such is greatly enhanced. In the case of the Auricula show, the classes for these very beautiful flowers are limited to florists' varieties, all of which are grown in pots under glass culture, which necessarily entirely unfits them for outdoor or hardy border culture. But so far there never has been a single class for hardy border varieties, plants in good clumps shown as such, as border Polyanthuses are, and which have encouragement because they add so much to the spring garden.

I was surprised to read elsewhere recently a very deprecatory article on the Auricula as a border flower. The conclusion was astonishing, seeing that myriads of Auriculas are so grown and thrive and bloom finely. Possibly the writer was referring solely to show or florists' varieties. These are not fitted for outdoor planting. But we have a very hardy border section suitable for the garden

that merit as much encouragement as any of the finest shows or alpine. What is needed in connection with this border section is that some enterprising and enthusiastic amateur should take them in hand and greatly improve them, for there is ample room to do so. A few packets of seed obtained from diverse sources, sown at once in shallow pans or boxes on fine soil, shaded from bright sunshine and kept gently moist, would in a few weeks give hundreds of plants. These, when strong enough in leaf and root, should be dibbled out into a nursery bed in a slightly-shaded position, the bed, 4 feet wide, being somewhat raised in the centre, as Auriculas are impatient of water lying about them. If put out 6 inches apart, probably every plant would flower the following spring. Then a drastic weeding-out should take place, preserving only those which give bright, rounded flowers held erect on stiff foot-stalks, and if but few, perhaps so much the better. From these seed, so far as was practicable, should be saved and sown a couple of weeks after being found ripe, as germination on the part of these hard-shelled Primula seeds follows so much more quickly when new than when old. Were that course of hard weeding-out of all poor colours or inferior flowers or stem-supports adopted fearlessly each year with all seedlings, in some eight or ten years a vastly-improved strain would be secured, and one which even then could still be developed. It would not do to retain weakly plants, as for outdoor work only quite free-growing, robust ones will do. In a garden here in Kingston last spring, on a border facing west, I saw a large number of strong Auriculas flowering most profusely, and they were quite a charming sight. Too often border Auriculas suffer too much from being grown on the flat. If a special border were made for them, with some old brick or mortar refuse, small portions of broken brick and some wood-ashes well worked into the soil, at once creating a ridge or raised mound on which to put out the plants, they would not only greatly benefit, but be far more enduring. It is also good policy, when plants get large or straggling, to lift them, pull them to pieces, cut away all decaying stems or rootstocks, and replant. The spring, so soon as the bloom is over, is, as a rule, the best time, as just then Auriculas make new roots. The National Auricula Society offers prizes for hardy border Polyanthus; but in regard to these there seems to be little effort to create a superior strain. Really there is less quality, as a rule, seen in these flowers than was presented thirty years ago. They again offer a wide field for the amateur florist to disport in. A. D.

TWO FINE ASTILBES.

There have been numerous introductions from China during the last decade, but two of the best herbaceous subjects are Astilbe Davidii

and A. grandis. The former is similar to A. japonica, so far as the foliage is concerned, but on a larger scale, while the flower-stem reaches a height of 4 feet to 6 feet, the top portion being densely covered with small rose violet blossoms. The latter is very like A. Davidii in general habit, but it produces tall spikes of pure white flowers, and is a charming acquisition. Both are quite hardy, and will succeed in a damp border. S.

NARCISSUS ATHENE.

This Daffodil, illustrated herewith, was exhibited for the first time by Messrs. Barr and Sons on



NARCISSUS ATHENE, A NEW PALE YELLOW TRIANDRUS HYBRID.

March 19 at Vincent Square, Westminster. At first sight one would take it to be an ordinary trumpet hybrid, but on a closer examination its triandrus parentage is seen. We are accustomed to such triandrus hybrids as Dorothy Kingsmill and Princess Ena, which are bicolors; but to get a yellow self is a distinct novelty, and herein lies the interest of Athene. It is of a lovely self sulphur lemon shade of colour, with a short trumpet, boldly reflexed at the brim. Size: Diameter of perianth, $3\frac{1}{2}$ inches; trumpet, 1 inch long by $1\frac{1}{4}$ inches broad at the top. It is one of Messrs. Barr and Sons' own seedlings, and is as beautiful as well as unique variety. J. JACOB.

COLOURED PLATE.

PLATE 1449.

THE MODERN GLADIOLI.

It is quite *à propos* that this week's coloured plate should be of Gladioli, for those who intend growing these glorious summer and autumn flowers should have the planting completed within the next week or so. Moreover, Gladioli are propagated by seeds, which ripen and germinate quite satisfactorily, and if not already sown it should be done with all possible haste. It is usual to sow in large pans or boxes, where the young plants may be thinned out and allowed to remain for the first season. The seeds germinate best in heat, and after hardening off, the seedlings may be stood outside during the summer months.

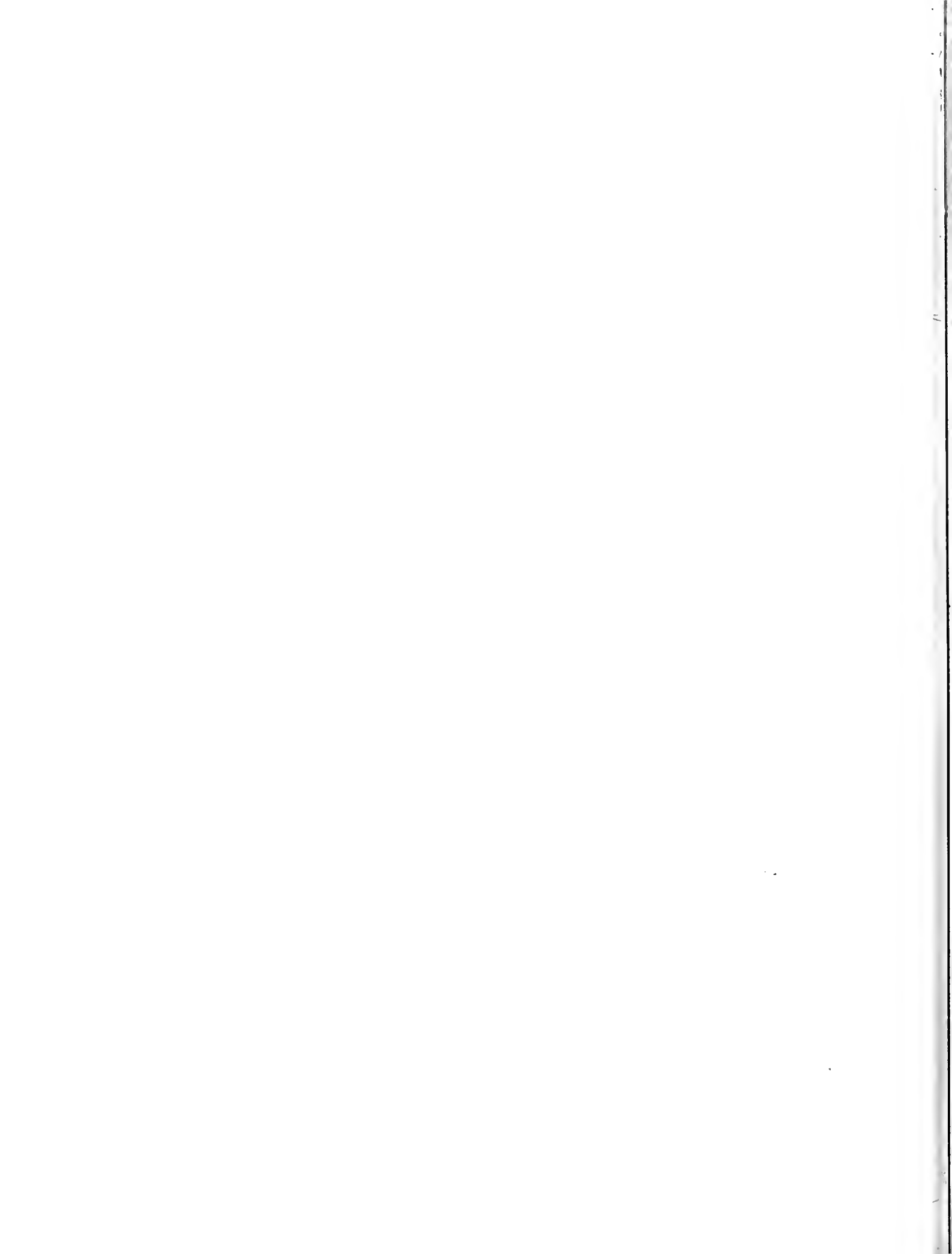
Planting the Corms.—With the exception of the early-flowering section, such as G. nanus and G. ramosus, which are best planted in the autumn, the bulbs, or corms as they are more correctly termed, may be planted now. In carrying out this work there are one or two salient points that merit attention. A deep rich soil, which must be well drained, and a sheltered, sunny position are requisite in order to grow Gladioli to perfection. The soil should have been prepared the previous autumn by trenching and the addition of copious supplies of well-decayed farmyard manure. Under no circumstances should fresh manure be applied just previous to planting. An error that is too often made is planting the corms with a dibber; by so doing the roots have not a fair chance to permeate the soil. It is better to plant with a spade or trowel. Allow plenty of room between the corms—1 foot each way will not be too much—and cover with about four inches or five inches of soil. Make the soil fairly firm, and then cover the bed with a light dressing of strawy manure.

Summer Treatment.—When the plants have made about a foot of growth, they may be assisted with occasional applications of diluted liquid cow-manure and soot-water. These may be given alternately once a week until the flower-spikes make their appearance. At this stage the applications may be increased until the first flower of the spike opens, when manure-water should be withheld. After the flowering has ceased the corms should be lifted and dried, and after cutting off the stems be stored in a dry place till the following planting-time.

Wonderful improvement has taken place among the Gladioli in the last decade. Three handsome varieties—Queen Maud, Lady Muriel Digby and Flaming Sword—are depicted in our coloured plate. The flowers from which the original colour photograph was obtained were kindly sent to us by Messrs. Kelway and Sons, Langport, Somerset.



Three good Gladioli—
Left: Queen Maud. Centre: Lady Muriel Digby. Right: Flaming Sword.



THE ROCK AND WATER GARDEN.

A BEAUTIFUL ROCK GARDEN PRIMROSE.

(*PRIMULA CAPITATA*.)

P *PRIMULA CAPITATA* does not seem to be grown to the extent its beauty justifies, and this is rather extraordinary, since it does not appear to be in any way difficult to cultivate, and has the very great advantage of coming into blossom in autumn, when nearly all other *Primulas* are over. In appearance it gives one the impression of a very refined *P. denticulata* of from 6 inches to 9 inches high. The leaves are much wrinkled, and to some small degree covered with farina, especially on the under sides, while the flower-stalk and calyces glisten with this white deposit. The flowers themselves are of a rich purple, though varying as to depth of colour in different plants.

The situation which it prefers seems to be one where the roots will always be moist, though where the plant will not be so fully exposed to the sun as to be scorched. At the same time, I find it does well where ample light falls upon it. In this consideration, however, I may be in somewhat special circumstances, being so near to London, and so never getting the sun as intensely bright as further out in the open country.

The soil may with advantage be composed of peat, leaf-mould, loam and sand in about equal proportions, and I usually add a quantity of broken brick which has passed through a half-inch sieve, and which seems to me to be appreciated by the plants, since their small roots lay hold of these hard nodules very readily, while such porous grit tends to keep the soil open.

Recently I have grown this charming *Primula* somewhat as a crevice plant, where its roots could deeply penetrate the soil before described, and the accompanying illustration gives some idea of its appearance as the flower-stalk rises from such a cleft.

In the spaces between the stones, either on the surface or at the edge of a semi-moist place, such as one of the many little "bays" which occur in the rock garden, this little autumn-flowering Indian *Primula* looks particularly beautiful. It comes readily from seed, and sometimes flowers the first year, though the plants are stronger if they do not do so till the second. Some plants which I pricked off in the late spring of 1911 were in flower with me at Christmas, and they were very welcome. This may perhaps have been due very largely to the abnormally "soft" winter we had up to then experienced.

Woodford, Essex.

REGINALD A. MALBY.

DOUBLE-FLOWERED PRIMROSES AND POLYANTHUSES.

OF late years the double *Primroses* have not received a high place in the consideration of fastidious gardeners. Their merits have been

somewhat overlooked and cast into the shade. This neglect seems due to the apparently superior attraction of bedding plants, as they are called, and the double *Primroses* have been rarely seen except in cottage gardens, where they do not receive even the slight amount of tending necessary to bring them to perfection. Under these circumstances any plant is bound to deteriorate, and the *Primroses* have proved no exception to the common fate and, in consequence, their high possibilities have been lost sight of by enthusiastic gardeners. Still, the fact remains that, for those who love a blaze of beautiful and varied colours to enliven the tentative brightness of early spring, the double *Primroses* have very great merits; and it is possible that gardeners are beginning to lament their neglect, for there have been many enquiries recently for rare and half-lost kinds, which, of course, are difficult to procure.

naked border, under conditions utterly different from those which Nature demands for the plants, meet with failure? The excessive evaporation and the blowing away of the leaves would be quite enough alone to account for failure.

As far as possible, the double *Primroses* should be supplied with the same necessities of life as the wild variety enjoys. They should be grown in rich vegetable soil, and the ground should be prevented from drying up unduly during the hot months of the year by layers of leaf-mould spread upon it before the warm weather sets in. The shade of the woodland should have its counterpart in the garden. They should be planted in some place sheltered and protected from the direct rays of the sun.

Propagation.—It is a good plan to choose some permanent place for them, for they should never be disturbed except for the purpose of division.



PRIMULA CAPITATA, A HIMALAYAN PRIMROSE SUITABLE FOR THE ROCK GARDEN.

The peculiar value of these *Primroses* is the great variety of colour possible—a quality rare and precious to us gardeners who aim at producing good colour-effects under an inauspicious northern sky. Scarlet, purple, yellow, red, salmon, white, lilac and blue are all possible colours, and the most brilliant shades should be sought after by those who want their results primarily for spring show.

Then the easy conditions of cultivation should do much to increase the popularity of these plants. Shelter from wind, partial shade and good rich soil are the only essentials for their well-being. In considering the question of *Primrose* culture, we cannot do better than be guided by the conditions under which the common *Primrose* grows luxuriantly. It is found in abundance in woods where the trees and grass afford an efficient shade, thriving on the moisture consequent upon this companionship. This being so, is it surprising that gardeners who plant *Primroses* in full sun on a

This point is most important, for double *Primroses* never produce seed, and one has to depend on division alone for their propagation. Division should take place soon after they have ceased flowering. It is very necessary to bear this in mind, and also that the only way to keep them in health is to divide them whenever they show any signs of deterioration. Like all other perennials, they have a tendency to deteriorate unless they are kept at the very highest state of vigour, and to have double *Primroses* in perfect health, the following precautions must be observed: Division after flowering, the occasional addition of new and rich soil, protection from strong winds and partial shade. Without these, good results cannot be obtained. I have seen them growing in a very satisfactory manner among Gooseberry bushes, these companions giving shade and shelter, so good for them. Here I have them planted in large masses in a border facing north, protected from

the south and east by a high, dense holly Hedge, and they produce excellent results.

The Best Varieties.—The best known and most easily grown are the White, Lilac and Early Sulphur. The finest and most difficult to grow is Pompadour, which, when at its best, is a sight to see with its beautiful velvety rich crimson flowers. As in the case of the rose and salmon shades, the more beautiful the tone the harder it is to keep them. In the colder parts of the country all these three should be grown in cold frames. The heat and long-continued drought from which we suffered last year proved highly disastrous to Primulas in general, and the death-rate was so high that there is likely to be a great scarcity of double Primroses this year.

The following may prove useful to anyone making a collection: White, Lilac and Early Sulphur, all very hardy and easy to grow; Amaranthina, sometimes called Red Paddy; Burgundy, crimson purple; Carnea, salmon pink; Croussii, violet, edged white; Cloth of Gold (Lutea Plena), fine large yellow flowers; French Grey, one of the most beautiful, very hardy and easy to grow; Pompadour, deep ruby velvet; Late Yellow; Rose, very lovely; Sanguinea, red; A. Dumollin, deep violet.

In course of time a number of other shades will be seen, including blues. A considerable amount of work has been done of late years in connection with the raising and cultivation of new coloured doubles, and we may confidently anticipate that the labour thus expended will bring satisfactory results, and that the new coloured plants will be increased as quickly as possible and brought upon the market. The double Polyanthus are also most interesting to cultivate, and quite worth the amount of attention involved in bringing them to a state of perfection. The finest I know are the old, almost extinct, Crimson King, a splendid double, strong growing, beautiful deep red—not the Crimson King of commerce, which is nothing but the double Primrose, Sanguinea Plena; Curiosity or Golden Pheasant, yellow and red; Tortoise-shell (Dernclengh), crimson, marked with gold; Harlequin, crimson, petals tipped white; Prince Silverwings, purple, edged white; and Rex Theodore, very rare and difficult to get, deep crimson and yellow.

Morelands, Duns.

JOHN MACWATT.

THE WHITE SIBERIAN SQUILL.

SCILLA SIBIRICA ALBA, the white Siberian Squill, is growing in favour as it becomes cheaper. I am not sure that I like it better than the blue variety, but it must be admitted that its white flowers come in well after those of the Snowdrops are nearly over, and the blue and the white Siberian Squills associate well together. S. ARNOLD.

TREES AND SHRUBS.

THREE BEAUTIFUL HARDY HEATHS.

THE hardy Heaths, *Erica lusitanica*, *Veitchii* and *arborea*, have been beautiful for weeks, and for the next month will be magnificent. They are much more hardy than is generally supposed. We have had 20° of frost this season, and this has not affected them in the least. I enclose a spray of each for you to see. [Very good.—Ed.] These *Ericas* can be grown either from seeds or cuttings. They will grow in practically any soil where lime is absent. On the sides of

and the plants may be kept in shape by pruning for use. If not pruned in this way, the pruning should be done immediately the plants have done blooming, so that the new growth will not have to be cut away. All have white flowers. *Erica Veitchii* is a cross or hybrid between *lusitanica* and *arborea*. The last-named is very sweet-scented, and *E. Veitchii* takes after its parent in this respect.

The Gardens, Leonardlee. W. A. COOK.

A NEW FLOWERING SHRUB.

(*CORYLOPSIS VEITCHIANA*.)

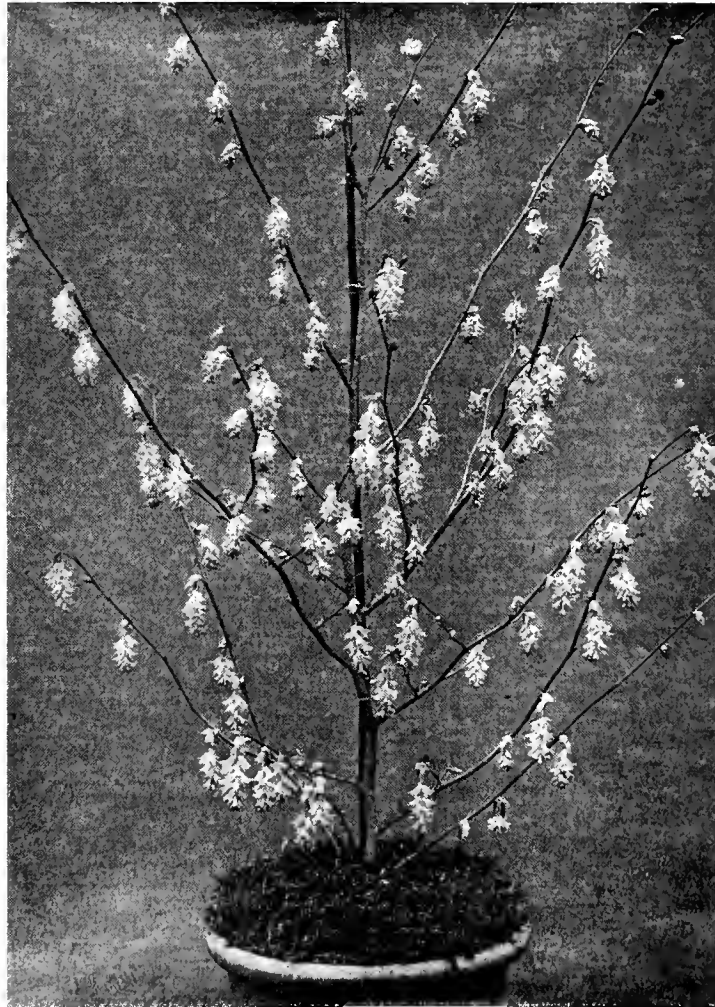
THE accompanying illustration of this shrub is from a photograph taken at the Royal Horticultural Society's Hall on March 19, when the plant was granted an award of merit by the floral committee. It clearly depicts the floriferousness and habit of this new introduction from China. The plant shown was raised from seed collected by Mr. E. H. Wilson when working on behalf of the Arnold Arboretum. The seed was sown in the spring of 1908, and the plant has since done excellent growth, being now about four feet high and nearly a yard in width. The flowers are produced about the same time as *C. spicata*, an old favourite among our early-flowering spring shrubs. *C. veitchiana*, however, has a delicious scent, resembling a *Boronia*, which characterises it from the former. The growth is also more upright, and the flowers are slightly paler than those of *C. spicata*, more loosely disposed and easily distinguished by the tomentose bracts, whereas those of its neighbour are membranous. The wood of this new species is slightly paler in colour. This shrub will, no doubt, when better known, become exceedingly popular. E. BECKETT.

Aldenham House Gardens.

AN INTERESTING THORN.

CRATÆGUS TANACETIFOLIA is a Thorn which cannot easily be mistaken for any other, especially when in fruit, for in addition to the fruits being exceptionally large and fleshy, they are yellow in colour and bear a few scattered, leafy bracts on the surface. It is a native of the Orient, and was introduced to this country in 1789. Of somewhat fastigate habit, its branches

have a rather stunted appearance, and are usually covered with short spur-like growths. The hairy leaves are very deeply lobed, and most closely resembled by those of *C. orientalis*, which is found in the same region. Its flowers are white, and they are produced during May. The Apple-like fruits ripen during September and October, and are sometimes nearly an inch in diameter. Although introduced so long ago, it is not a common species, and really good examples are rare. It is sometimes grafted on to stocks of common Hawthorn, but is more satisfactory when grown on its own roots from seed. W.



CORYLOPSIS VEITCHIANA, A BEAUTIFUL NEW SHRUB WITH YELLOW FLOWERS. RAISED FROM SEED SOWN IN 1908.

hills or banks facing north or south, and when planted about in various and different positions, one has a longer season of flower.

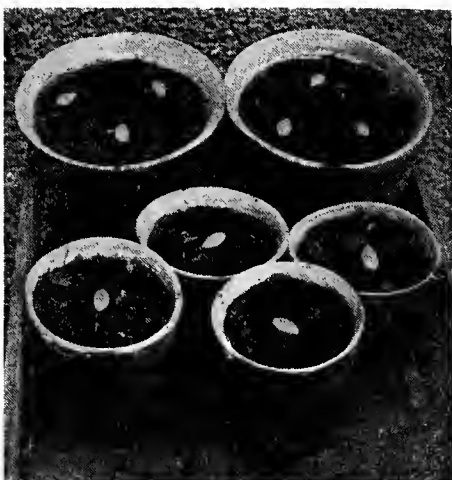
When planting out from pots, a good plan is to use a little extra good and fine soil just to give them a start. A cartload of a mixture of half leaf-soil and broken peat, with a sprinkling of sand, will be enough to plant several dozen, taking care that the soil is made as firm as possible about the roots. When well suited in their requirements, they soon make large plants, when they not only become very decorative, but are extremely useful for cutting. Heather is always acceptable,

GARDENING FOR BEGINNERS.

HOW TO GET EARLY BEANS, MARROWS AND RIDGE CUCUMBERS.

ALTHOUGH it is yet too early to sow seeds of French and Runner Beans, Vegetable Marrows and Ridge Cucumbers in the open garden, the beginner who has a cold frame, or even a moderately deep box and a few good-sized pieces of glass, may make a start with these plants. The average amateur still has to realise that the Beans under notice will transplant as readily as Tomatoes. Marrows and Ridge Cucumbers he may know will do so, because the general practice is to buy a few plants from any chance dealer that may come along, plants that have become debilitated by too much warmth and insufficient air. Seeds are cheap and home-raised plants are usually far the best.

Sowing the Seeds.—In the issue for March 23, page 149, illustrations showing the draining of seed-boxes and the sowing of other seeds were given on



2.—SOW VEGETABLE MARROWS AND RIDGE CUCUMBERS IN POTS AS SHOWN.

this page, and the box shown in Fig. 1 has been drained and filled with soil in precisely the same way as then advised. Ample crocks or broken pots were placed over the drainage holes in the bottom, then some rough soil, and finally the sifted material. As a good quantity of Beans are required for a row, boxes are the most economical receptacles to use, as they hold a number of seedlings and do not take up a lot of room. They ought not to be less than 3 inches deep. The soil should be composed of the best loam obtainable two parts, well-decayed manure one part, or, failing this, Hop Manure at the rate of a double handful to each peck of soil, and a good dash of coarse sand. The seeds ought to be sown in rows as shown in Fig. 1. It will be noted that by this arrangement each seed has the maximum amount of space, and is really in the centre of a circle of its fellows. Nothing is gained and much may be lost by thick sowing. Cover the seeds with an inch of finely-sifted soil, give a watering with a fine-rosed can, and, after allowing the whole to drain, stand quite level in a cold frame. Both Runner and Dwarf French Beans may be raised in this way.

Marrows and Cucumbers.—As the average amateur only requires a few of these, it is best to sow them in pots. I prefer to sow the Marrows three in a 5-inch or 6-inch pot, and the Cucumbers singly in 2½-inch pots, as shown in Fig. 2. For the purpose of illustrating this, Marrow seeds were also used in the small pots, as their large size renders them more conspicuous. The pots must be clean, dry and well drained, and soil similar to that advised for the Beans may be used.

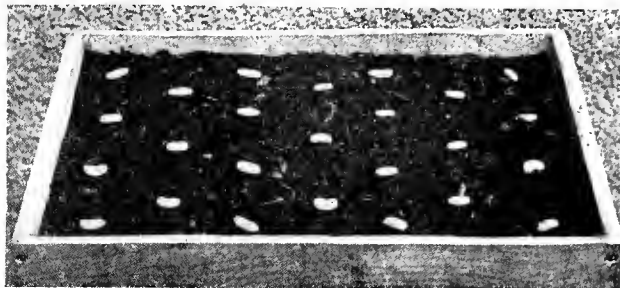
If frame room is plentiful—which is not at all likely at this season—the Marrows could be sown separately in the smaller-sized pots, though these are none too deep for the roots, which are coarser than those of the Cucumbers.

After-Treatment.—As already stated, a cold frame is an ideal place for the seed-boxes or pots after sowing and watering; but usually in the spring months the frame is filled with half-hardy annual flowers. If this is the case, procure a box about eight inches deep, make a few holes in the bottom to allow water to run away, and stand the receptacles in this, as shown in Fig. 3. A good pane or two of glass over the top makes a miniature frame that answers this and many other purposes quite well. If desired, the bottom can be knocked out of the box, and an earthen floor, coated with ashes, used.

As soon as germination has taken place and the seedlings can be seen pushing their way through the soil, ample ventilation must be given, taking care, however, to avoid as far as possible cold cutting winds blowing direct on to the young plants. But remember that robust, short-jointed plants are the ones that will give the best account of themselves when planted out. The positions where they are to go should be well dug and manured as soon as possible, so that by the end of the third week in May, when the seedlings may be safely transferred to the open, the soil will be in good condition. S. S.

CLARKIAS IN BORDERS AND POTS.

THE double-flowered Clarkias are very beautiful and make a brilliant display at a small cost. In open borders clumps of plants look very effective, and when well cultivated in pots handsome specimens may soon be had for the decoration of the cool greenhouse or conservatory. Few kinds of plants are more easily grown, and the beginner who wishes to have plenty of blossom in a short time should raise a stock of plants at once if for



1.—BOXES 3 INCHES DEEP ARE SUITABLE FOR SEEDS OF RUNNER AND DWARF BEANS.

cultivation in pots. Those intended for the open border must be sown during the latter part of April, and, again, more seeds should be sown at the end of May, and thus ensure a prolonged open-air display. As a compost use fibrous loam and leaf-soil in equal quantities, and add a 7-inch potful of rotted manure and a similar quantity of coarse sand to one peck of the above combined parts. Mix the ingredients well, and then three-parts fill a number of 6½-inch pots with the compost, taking care to put in a few crocks to ensure drainage. Drop about a dozen seeds evenly on the surface of the soil and lightly cover them with some finer sifted soil. When the young plants appear, thin out freely, not leaving more than five of the best in a pot. Grow the plants in a cool frame and admit plenty of air. Stake in due course, and feed with weak doses of liquid manure when the pots are well filled with roots.

A Few Beautiful Varieties.—Clarkia elegans White Prince, double, pure white; Salmon Queen, salmon; Purple King, purple; Brilliant Princess, rose; integripetala, both the double rose and double white; elegans, purple; and elegans alba, white. The two last-named may be grown in quantity in outside borders. SHAMROCK.



3.—A BOX ABOUT 8 INCHES DEEP COVERED WITH PANES OF GLASS IS A USEFUL ADJUNCT TO A COLD FRAME.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Summer Bedding.—The subjects intended for planting out for the summer display must now be seriously taken in hand with a view to thoroughly hardening them off for planting out next month. For the hardier subjects, means should be taken so that some protective material can be thrown over at night. Give the more tender subjects the protection of a cold frame. Admit plenty of air whenever possible.

Spring Bedding.—Encourage the plants as much as possible by aerating the soil with the Dutch hoe, and any plants needing a stake should be neatly attended to.

Wallflowers.—To obtain good strong plants, the sowing of these should not be deferred till too late a date. From the middle to the end of April sow the varieties thinly in shallow drills 9 inches apart, and when the plants are of sufficient size, transplant them into rows, allowing 6 inches between the plants. Where cut flowers of these are much in request, the plants, after the bedding is past, may be transplanted and given a mulch, later on they will provide a plentiful supply.

Violets.—For supplies for forcing next winter, take the earliest opportunity of increasing the old plants by division, and plant out in a border, selecting one for preference that is shaded from the brightest of the sun's rays. Plant 6 inches apart for the doubles, and allow the single varieties a little more space.

Hardy Ferns.—Many a shady corner might be devised into quite an interesting fernery with but very little cost. Now is a splendid time to plant.

Orchids.

Calanthes.—In the majority of cases the young growth will be sufficiently advanced for repotting. Shake away the old soil, taking care not to break the bulb, and leave a few of the old roots for a firm hold in the soil. Loam, rough leaf-mould, peat, broken potsherds and a little dried cow or sheep manure will be found a good compost. Secure the pseudobulb to a neat stick if needs be, and stand in a warm house. Water very sparingly for a time, but damp freely between and around the plants.

Cattleyas.—Many of these that have been in the same receptacles for several years will benefit by having the old compost pricked out and some new added just as growth is commencing. Insert a few patches of live sphagnum moss on the surface.

Sophranitis grandiflora.—This dwarf Brazilian Orchid is very pretty just now with its scarlet flowers suspended in small pans from the roof, and is suited for culture in a cool house. When growing give a fair amount of water, and in the winter this should not be entirely withheld.

Plants Under Glass.

Eucalyptus globulus.—Young plants that were raised from seed sown in a warm house will be ready for potting singly into small pots. For a time give them a warm, moist house; but later they can be treated quite coolly. They are fine foliage subjects for the conservatory and greenhouse, also for bedding out of doors during the summer months. For the former purposes *E. citriodora* is a plant worthy of extended culture.

Poinsettia pulcherrima.—A stock of this winter-flowering subject should be raised by taking the young growths from the old plants that were cut back to within eighteen inches or so of the base, and placed in a warm house to break into growth. Root them in a close frame with a brisk bottom-heat. A stock can also be raised from eyes inserted in sandy soil in pans.

Euphorbia jacquiniiflora.—Take cuttings of this as advised for the above, and insert singly in small pots.

Cobæa scandens variegata.—This attractive greenhouse climber requires an annual thinning in order to keep growth restricted and, furthermore, clean, and is seen to the best advantage when the growths are allowed to hang down from the rafters. Mealy bug is a troublesome pest, and should be kept in check.

Genista fragrans.—After the flowering period of this delightful old greenhouse favourite is past,

the plant should be trimmed into shape prior to recommending growth.

Amaryllis.—After the flowers are past, and while growth is making, assist the plants with copious waterings and stimulants. These are necessary to ensure them flowering to the best advantage next year. Gradually give more air, and when the leaves are fully matured allow the plants to rest in quite a cool, airy structure.

The Kitchen Garden.

Winter Greens.—A sowing should be made this month of the various Kales for a supply during the winter months. Select a narrow border for preference, sow the seeds thinly and label each variety correctly. Net the bed over to protect from the birds. Avoid a piece of ground that has borne any of the Brassica tribe recently, not forgetting that Turnips come under the same category.

Chicory.—This crop is easily grown; it is of the greatest value for winter salads, and one of the easiest to force. Sow the seeds when the weather permits in drills, and thin when large enough to 8 inches or 9 inches apart.

Cauliflowers.—Make a planting of these, such as Magnum Bonum and Walcheren, in the open ground.

Celery.—The pans or boxes of seed that were raised the beginning of last month will need hardening off, so that the seedlings may be transplanted into skeleton or shallow frames in the course of a week or so.

Fruits Under Glass.

Pot Fruit.—To assist the trees to mature their crops satisfactorily with their restricted amount of room, top-dressing should be done, and to allow of sufficient space for providing water it is best to have zinc collars to fit the rims of the pots, or make similar ones with turves. Vines in pots must not be allowed to suffer for want of water.

Strawberries.—During the time the fruits are swelling, a warm temperature should be given the plants and water supplied freely, and the plants assisted with manure-water. When commencing to colour, remove to a cooler house where more air is given, and expose the fruits as much as possible to produce the finest flavour. As later supplies set their fruit, support with a few twigs or wire. Plants that have been forced and are taken care of and watered as necessary make excellent material for planting out of doors, and will supply a second crop in the autumn.

Watering.—When it is thought necessary, the borders of fruit-houses should receive a good watering, washing down some good artificial fertiliser or using properly-diluted farmyard drainings. Select a day, if possible, when the air is warm and the opening of the doors does not cause too much draught. Vines after the thinning process is completed benefit by a good soaking, providing, of course, the drainage is in good order.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Vegetable Garden.

Broccoli.—Make another sowing, which may turn in for planting in better condition than that sown a fortnight ago.

Beetroot.—The main crop may now be sown in deeply-trenched soil, recently well pulverised on the top spit. Dell's Crimson and White's Black are reliable sorts. Large-rooted varieties must not be sown till the beginning of June.

Onions.—This is a generally suitable time to transplant early-raised Onions from the boxes to the garden quarter set apart for them. Dress the surface with superphosphate of lime previous to planting or drawing the lines. The roots should be deeply buried, but the base of the plants just under the surface. Once planting is completed, the ground is hoed, and, as a rule, the roots having been drawn through a mixture of soil and water, they need no further attention for some time.

Cauliflowers.—Early-raised plants now in 3-inch pots grow very rapidly, and must be planted out before the balls of soil get full of roots. In planting set them well into the ground, and water them in unless the soil is already wet. Protection

by means of inverted flower-pots, one over each, is imperative. The plants never obtain a proper grip of the soil, and must on that account be regularly supplied with water at the root, preferably weak manure-water. Soot is valuable, as it to some extent lessens the damage effected by root maggots.

The Plant-Houses.

Carnations.—More space will be wanted for Malmaisons, which may be had by turning out some of the winter-flowering plants.

Zonal Pelargoniums.—The recently-rooted cuttings now in 2½-inch pots should be transferred to others 4 inches in diameter. Keep them rather dry at the root till new roots begin to work, and pinch the point out of the plant a week or so subsequent to repotting. The plants must meanwhile be stood in a pit or on a shelf of the greenhouse near the glass.

Cyclamen.—Seedlings the roots of which have filled 2½-inch pots must also be transferred to others, but those 3 inches in diameter are to be preferred to a larger size. They should be in a warmer structure than Zonal Pelargoniums, but not a stove, and arranged within a few inches from the glass. Old plants going out of bloom may be placed in a cold frame, giving very little water at the root in the meantime.

Hydrangeas.—Recently-rooted cuttings will shortly need a shift on into 4-inch pots. These require very firm potting, and may be grown on in these pots all the summer and flowered early next year. But for late spring and summer flowering it is necessary to shift them on. They may either be placed for the present in a cold pit or a cold frame. Old plants yet to flower need abundance of water at the root and a gentle heat; but if for summer flowering should be allowed to come on in a cool structure.

The Flower Garden.

Annuals.—In late districts these should be sown, and in warmer localities *Nasturtium* and various *Amarantus* may now be safely sown.

Larkspurs.—Though quite small, the seedlings raised in small pots or boxes should be planted out at once, even though bulbs are in the beds. They make scarcely any progress for some weeks. I am arranging Mauve Emperor with mauve *Ageratum*, and dark blue Stock-flowered with *Lobelia cardinalis* variety, mauve *Ageratum* and variegated Ice Plant for some principal beds.

Hollyhocks.—Young plants from seeds sown last September are now quite strong enough to plant out where they are to flower, and for ordinary decorative purposes they do not require such highly-manured ground as is usually advised. They are seen to the best advantage in groups of at least seven plants, set rather close together and of one colour, though isolated plants here and there in borders are not without a decorative value.

Sweet Peas.—These in most localities may be safely planted out in the course of the next ten days. I arrange them singly about two feet apart, and place the main sticks to them, as well as short pieces of dead Spruce branches, as a protection till established. Those from boxes must be tied to short sticks, and if the ground is infested with slugs, repeated dustings of soot will be needed to preserve the plants from being eaten.

The Fruit Garden.

Pears.—Where spurs have grown too large to give the buds and after-foliage room, it is worth while to examine the trees at this time and reduce any that have been overlooked at the winter pruning.

Apricots.—Quantities of leaf-buds just breaking into growth must be removed, leaving only a sufficient number to enable the trees to bring forward their fruit and to provide for another year. The observant man will most likely have reduced the number of buds already; if not, it is better to take them off by degrees rather than to denude the shoots at one disbudding. Our trees were in full bloom at the middle of March, but it is full early enough to thin the fruit.

Spraying Apples.—The buds are very forward this year, and if it is intended that they should be sprayed before the blossom has opened, it must be seen to at once. Spraying is of no avail unless it is so perfectly performed that every part is covered.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

DAFFODILS AT VINCENT SQUARE.

APRIL 2.

MY Daffodil memory does not go back to that of a certain good friend of mine, who remembers the time in the sixties when he had only *Telamonius plenus* and *Poeticus angustifolius* in his collection, and whose interest from that time has been incessant. I wonder if he has ever seen more beautiful blooms together at one time at any London show. I never have. Ten medals were awarded, and there were several smaller groups that did not come up to silver medal form. This will give my readers a little idea of the vast numbers of flowers that were exposed to view. The wonderful and distressing season was much in evidence. Here it was the Poets—Poets cut from the open in the month of March, an almost unheard-of event; there it was the rich colour of the red and red-edged cups; while there were reminders that the season has been none too kind, and that Daffodils do not appreciate the bustling antics of King Sol.

Notable Exhibitors.—The Rev. G. H. Engleheart, our universal provider, was pretty well at the top of his form, and his display of yellow and bicolor trumpets was very fine. These, with some lovely Leedsis and Poets, formed an exceptionally interesting group. Every one was a new seedling, and before the Plums were picked out there must have been about one hundred and thirty varieties. I measured some of his largest. The figures will tell their own tale. Largest yellow trumpet: Diameter of perianth, $5\frac{1}{2}$ inches; trumpet, $1\frac{1}{2}$ inches long by $2\frac{3}{4}$ inches wide at brim. The largest bicolor was 5 inches by 2 inches by $1\frac{1}{2}$ inches, and the largest Leedsii 5 inches by $1\frac{1}{4}$ inches by 2 inches.

Messrs. Barr and Sons had a large collection of old and new varieties. An old friend which I was glad to see again was Golden Jubilee, of Haarlem fame. It is a particularly good example of the giant incomparables, as I suppose we should now call them. The perianth was, however, ribbed; but this is a rough year, and many things show its signs. Aurelia, a hybrid between Monarch and *Jonquilla simplex*, is a very deep yellow bloom after the type of Buttercup. Brunhilde is a giant Leedsii ($4\frac{1}{2}$ inches by three-quarters of an inch long by 1 inch) of much substance and a tall grower. Its perianth is of the double triangle order, and is a nice shade of pale yellow. Sheba, which was shown last year at Birmingham, has a peculiarly deep shade of red in its eye; possibly madder red is as near as one can get in a description. Another flower with a white perianth and fiery red cup is Ruby. It has a beautiful smooth and symmetrical appearance. I think I mentioned Mohican in my last notes as a sister flower to Sunrise. It has much the same character, but is not so round. I am told that it is very good for pots, and it is one of the things I have put down for a trial next year. Cœur de Lion looked striking in two large bunches. It is a little like a larger and a redder cupped Castile. Talking of bunches, what is there better or more effective than the old Firebrand? It is small, but in a mass one sees nothing but the wonderful little red cups.

Varieties to Receive Awards.—Mr. A. M. Wilson's group was full of good things. Indeed, there were so many of them, and no poor ones by way of contrast, that it took one a considerable time to realise the feast provided.

Three varieties received awards from the Narcissus committee. *Cœsus*, a giant incomparabilis, with a circular, widely-segmented perianth of a pleasing shade of primrose and a large, widely-expanded cup of deep rich red, was given the rare honour of a first-class certificate. A splendid pale bicolor, Killicrankie (perianth, $4\frac{1}{2}$ inches; trumpet, $1\frac{3}{4}$ inches by $1\frac{3}{4}$ inches), has a somewhat campanulate form, with the three inner segments slightly twisting. Unfortunately for another good pale bicolor, Onslaught, it was up for an award, too, and not so very long since it would have been sure of one; but now it was but a foil. It is little incidents like this that make us realise how our standards are being gradually tuned up. Pedestal is a solid-looking bicolor incomparabilis, the segments of which are broad, thick and much overlapped. The large cup is straight and of a full rich yellow. Here, again, Neptune was up against it, and although it is a flower of good quality, it had to be passed over in favour of Pedestal. A solitary bloom of an almost pure white little Leedsii called Geheimniss attracted the attention of all who like highly-refined flowers. It is only $2\frac{1}{2}$ inches in diameter, with a three-quarter-inch cup. I like Red Macaw (3 inches in diameter, with a 1-inch cup). It has a sharply, clear cut cup, with a broad, fairly well-defined red edge, a yellow centre and a smooth, good-looking white perianth. This particular type of colouring always appeals to me. Princess, for its price, is one of the very best white trumpets that are in commerce. It has an excellent perianth and shows great refinement and quality. It is listed at 12s. 6d. Cossack is a striking-looking Barri with broad, overlapping white segments of much substance, undulating in its general appearance, and centred with a well-proportioned cup of pure deep crimson. Kingsley was well shown.

Other Good Groups.—Messrs. Cartwright and Goodwin, as usual, had a good group, but there were not many novelties. Onslaught, which has much of the look of Weardale Perfection, I have already referred to. It is rather on the small side; its perianth is only $3\frac{1}{2}$ inches across. Red Sundew is a large, loose flower ($4\frac{1}{2}$ inches by three-eighths of an inch by seven-eighths of an inch), with an all-red cup passing to orange in the centre, and a pale yellow perianth. White Nectarine is the giant Leedsii which develops with age a deep buff edge. It is in this stage a decidedly out-of-the-common bloom. I never had a good look at Henry James before this show. It is a fine flower of high quality, and has pure white petals of great substance, much rounded and overlapping. It has a flat, soft yellow cup, faintly edged with buff.

Mr. Bourne had White King, a shapely giant Leedsii of great flatness; Little Joan ($2\frac{1}{2}$ -inch perianth and three-quarter-inch cup), another White Leedsii, with a beautiful flesh-tinted centre and an all-white perianth—a little gem; Red Armored, a starry flower with a fair perianth and a small reddish cup. There were two vases of Bernardino; no praise is too great for it. It is one of the "very great" Daffodils. Rydal Water is a really lovely bit of quiet refinement. Its large buff-yellow eye is well set off by a good white perianth.

Mr. Chapman of Rye showed a very fair group in which his own seedlings held a conspicuous place, a large proportion of which were red cups. He had a remarkable number of Poets. Horace was particularly good; so were Virgil and Kingsley.

Sea Horse was shown at Birmingham last year, I believe, for the first time. It is a seedling from King Alfred crossed with a Monarch seedling, and for refinement takes "a lot of beating." Mrs. Walter Wright might be noted as a good triandrus hybrid.

Messrs. R. H. Bath had some of the best pot-grown Darwins that I have ever seen. Really, they were in fibre, in bowls. They also had a little lot of, for the most part, stock varieties of Daffodils. Southern Star stood out well, and I heard several people remark about it. It is a bright flower. Lord Kitchener, the famous white Pearl of Kent, Bernardino and others of lesser note were prominent.

Miss Currey varied the usual type of staging by dividing her flowers into two groups, with a round-tiered projection from the back of the staging in between them. Here were grouped that little band of pure white trumpets, Atalanta, Mrs. Robert Sydenham, Lady of the Snows, Echo, &c., which one always associates with the name of Currey. They are a highly-refined class, originally "made in Holland." Lucifer was conspicuous on account of the deep bright orange red colour. I would like to call readers' attention to it as a garden plant. A superb yellow was Golden Shield, one of the acquisitions to the stand made during the course of the morning. It is $4\frac{1}{2}$ inches by $1\frac{1}{2}$ inch by $1\frac{1}{2}$ inch in measurement, and has a beautiful smooth, palish yellow perianth and a rich yellow trumpet. I admired it very much. I believe it is to be offered at about seven pounds or eight pounds a bulb.

Robert Sydenham, Limited, had the pretty little Cresset and the large majestic Noble in good form. The latter is a fine plant, and should be acquired as often as circumstances permit.

It is another sign of the abnormal season to find such a good and varied exhibit come from Lowdham; but Mr. Duncan Pearson, notwithstanding the temporary loss of all his flowers *en route*, exhibited a most interesting collection, in which giant Leedsis were much in evidence. A large number of their own introductions figured, such as Hon. Mrs. J. L. Francklin, Vega, Lowdham Beauty, Capella, &c. Special mention must be made of the exquisite pure white trumpet, La Lune. Pearl of Kent was near at hand, and was literally "knocked out by it." The former is a bloom of the most refined type, and goes white with age. It has a 4-inch perianth and a trumpet 4 inches by $1\frac{1}{2}$ inch by 2 inches.

The show of April 2 will be long remembered—partly for its size and quality, partly as a product of this curious season. JOSEPH JACOB.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Narcissus Cœsus.—The award in this case is a sufficient guarantee of excellence, and *Cœsus* to-day is virtually unique, absolutely so in regard to its great spreading crown of flaming orange, which constitutes a blazing orb of fire. The perianth is of sulphur yellow tone and shapely in the extreme, though there is not quite enough of it in proportion. Hence we look forward to the time when *Cœsus* will inherit its kingly place, when the present moderately large perianth will be replaced by a more handsome and, as we think, fitting one. For the present its position is unchallenged. It is magnificent. Exhibited by Mr. A. M. Wilson, Bridgwater.

AWARDS OF MERIT.

Camellia cuspidata.—A very beautiful new species from China, whose miniature single white flowers will appeal to all. The glossy ovate acuminate leaves are $1\frac{1}{2}$ inches long and obscurely notched at their margins. The plant forms a bush several feet in height, and, freely studded with the white, yellow-anthered flowers, has a very pretty effect. Quite a charming greenhouse shrub of a twiggy growth in keeping with the plant generally.

Viburnum Davidii.—Obviously a plant of merit, and of high decorative excellence as well as distinctness. As shown the species is of low, spreading, bush-like habit, the handsome leafage abundant, above which in short terminal heads appear the trusses of pure white flowers. These were exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Pelargonium ambrosea.—A pink-flowered variety of the so-called "bedding Geraniums." As shown the plants were dwarf and freely flowered. The colour is a very pleasing shade of pink. From Mr. P. Ladds, Swanley.

Primula Juliae.—A rare and delightful stemless species from the Caucasus, whose tufted perennial growth of not more than 3 inches in height, and from out of which in all directions the deep rosy lilac flowers appear in profusion, render it a great charm. The roundly-cordate, crenate leaves are about an inch or so across, and in their neatness and form are in perfect harmony with a plant which is as ideal as it is real. From Mr. W. G. Baker, Botanic Gardens, Oxford.

Primula intermedia Mrs. James Douglas.—This may be shortly described as a glorified Mrs. J. H. Wilson, with handsome blue, white-centred flowers of alpine Auricula size borne in large umbels. Quite a gain in this easily-grown section of Primulas. From Mr. J. Douglas, Great Bookham.

Primula warleyensis.—A new and pretty species, with pale lilac flowers, from China, at present provisionally named as above. The plant is of a miniature habit of growth, and from its appearance we imagine it to be a soil carpeter, a plant of mountain pasture, a lover of moisture perhaps, and delightful in colonies after the manner of scotica, farinosa and others. The plant is quite dwarf, 2 inches to 3 inches or so, and has the demeanour of one having turf and low mountain herbage for its bosom companions and closest friends. From Miss Willmott, Warley Place, Essex.

Rose Mrs. E. Alford (H.T.).—If we say at once that in this new-comer appears the embodiment of the best attributes of Mme. Abel Chatenay and La France—we know nothing of its parentage, by the way—the reader will get an idea of its distinctive beauty. There are the well-rolled recurving petals of both of these, wedded to a longer and more pointed flower, such as Mrs. G. Sawyer. In the main the colour leans to a rather pale Mme. Abel Chatenay, but the flowers are handsome and well set up on firm, bold stems. The variety is nicely scented.

Rose Mrs. C. Reed (H.T.).—The colour is pale blush, and we are not lost in admiration for a flower so flat, spreading and squatty as this appeared to be, despite its large size. In our opinion it is devoid of form or comeliness, and we want both, with fragrance also if we can get it, in the best Roses of to-day. Both of these were exhibited by Messrs. Lowe and Sawyer, Uxbridge.

Narcissus Pedestal.—A lovely incomparabilis after the manner of Lady Margaret Boscawen, with possibly not a little of the refining influence of some triandrus hybrid in its veins. A variety of great merit.

Narcissus Killiecrankie.—A giant of the pale bicolor set, in which the perianth is ivory or cream and the huge trumpet of a sulphury tone. The flower is very handsome. Both of these were shown by Mr. A. M. Wilson.

NEW ORCHIDS.

No fewer than three first-class certificates and five awards of merit were made by the Orchid committee, an unusual number of good things for one meeting. The awards were made as follows: **First-Class Certificates.**—*Cymbidium Pamelisii* The Dell variety, shown by Baron Schröder; *Lælio-Cattleya Trimyra* (*Cattleya Trianae* × *Lælio-Cattleya Myra*), exhibited by Sir Trevor Lawrence, Bart.; and *Lælio-Cattleya McBeanianum* (*Cattleya Schröderæ* × *Lælia* *aceps*), shown by Messrs. J. and A. McBean. **Awards of Merit.**—*Odontioda Cooksoniæ* Cobb's variety, shown by W. Cobb, Esq.; *Cypripedium Roger Sander* (*C. glaucophyllum* × *C. Godefroyæ*), from Messrs. Sander and Sons; *Lælio-Cattleya Orama* (*L.-C. dominiana* × *L.-C. blechleyensis*), and *Lælio-Cattleya Frederick Boyle Veitch's* variety (*Lælia* *aceps sanderiana* × *Cattleya Trianae*), both shown by Messrs. James Veitch and Sons; and *Odontoglossum His Majesty*, exhibited by Lieutenant-Colonel Sir George Holford.

The foregoing awards were made by the respective committees of the Royal Horticultural Society at the fortnightly meeting held on Tuesday, April 2.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PLANTING WASTE GARDEN (M. L. E.).—The fact that the ground is bare is not a good sign, and Beech trees are among the worst by their shade and root-spread to attempt any planting in their near proximity. In the leafless condition of the trees in spring you get bulbous plants to thrive by reason of that alone, while, later, air and light being shut out, precludes growth. Coarse grasses likely to grow beyond the limit of dense shade would be the common Cook's-foot Grass (*Daetylis glomerata*) and the Wood Soft Grass (*Holcus mollis*) or its near relative, *H. lanatus*. You will, of course, have thought of the Primrose, Wood Anemone, Wood Hyacinth and other such things that delight in the shade, moisture and other congenial company, and to these you might add the Butcher's Broom, Solomon's Seal, Woodruff (*Asperula odorata*) and, not least, the Dog's Mercury (*Mercurialis perennis*), than which no plant delights more in tree shade and cool conditions. We consider this last a better carpeter of woodland or waste places than grass, and we imagine there would be little difficulty in establishing it. The common Pilewort (*Ficaria ranunculoides*) is also good. Of plants of border aspect, the common Bracken (*Pteris aquilina*), Foxgloves, Cow Parsnip, Loosestrife and Willow Herb are all worth recommending. The Foxgloves being

particularly valuable. *Spiraea Ulmaria*, common Rush, *Inula dysenterica* and the like, with *Nepbrodium Filix Mas*, are all plants of the wood and waste places naturally, and these should first receive consideration at your hands. Such a spot is the home of the Bramble, Brackea, Rush, Foxglove and Fern, and to introduce gay-flowering annuals would be but to introduce an alien condition and incongruity devoid of restfulness and charm.

ROMNEYA COULTERI AND CATERPILLARS (M. G. B.). There are only two means open to you that you may keep your plant of *Romneya Coulteri* free from caterpillars. One is to examine the branches and leaves frequently, and pick off and destroy any caterpillars which may be found. The other method is to spray the leaves of the plant with an arsenical wash when the caterpillars first appear. Such a wash may be made by mixing 1 oz. of Paris green in thirteen gallons of water. Mix thoroughly and apply as a fine spray to both surfaces of the leaves. As the wash is poisonous, care must be taken in its use. A 2 per cent. infusion of white Hellebore has been recommended as a good insecticide for such cases; but we have had no personal knowledge of its action.

PLANTS FOR BALCONY (Hibernian).—There are plenty of subjects of an upright nature of growth, but few of a trailing kind that would be effective the whole summer. Various kinds of *Clematis* would look well, and they can be had in blue, mauve, white, pink and red colours. *Tropæolum speciosum* is very showy mingled with the beautiful silver Ivy, *manderensis variegata*. We suggest, as the pots are rather wide, that you plant in each one a nice pot specimen of *Polyantha Rose*, of such showy sorts as *Jessie*, *Orleans* and *Mrs. Cutbush*, and, to trail over the front, *Clematis*, variegated Ivy and *Tropæolum*. All should be pot-grown, and may be turned out of the pots into the iron pots, presuming these latter have drainage holes. The Roses should be in 6-inch pots, and purchased just when about to come into bloom.

ALPINE PLANTS IN PERGOLA PATHWAY (S. C.).—If the pathway under the Rose pergola is of sufficient width, you might indulge in a variety of plants, employing a few of taller growth near the sides, and the more miniature growing throughout the centre, where the track would be most used. In no case, however, should the plants employed be of such a cushion-like nature as to obstruct the pedestrian; that is to say, the lowest-growing plants only should be used, the true carpeters, so to speak, and which do not mind a little treading to boot. Too frequently everything and anything is planted, and subjects which at flowering-time reach a foot or 15 inches high are not suitable, unless for side plants. The best method of planting is done by raking out rather deeply the interstices between the stones, filling up the gaps so formed with gritty soil or sandy loam, and dibbling little bits in rather freely. Some of the best things are the *Sedums*, and such as *S. acre elegans*, *S. album*, *S. hispanicum* variety *glauca*, *S. corsicum*, *S. brevifolium* and *S. Lydium* in particular. Of *Thymes* you might select *T. Serpyllum coccineum* and *T. lanuginosus*. *Mentha Requiæni*, *Herniaria glabra* and *Arenaria balearica* are gems, and give carpets of emerald green. *Ligaria pilosa*, *L. hepaticifolia*, the *Eriogon*, *Mazus Pumilio*, *Psycidantha barbata*, *Hippocrepis comosa*, *Draba aizoides*, *Campanula pusilla*, *C. p. alba*, *C. pulia* and *C. muralis* are all good. In cool shade near the sides, *Omphalodes verna* would be charming. In some few instances *Dianthus cæsius*, *D. alpinus* and *D. squarrosus* might be used. *Aubrietias* and Mossy Saxifrages are often recommended, though, as a rule, they are too tufted and free.

ROSE GARDEN.

PRUNING SEMI-CLIMBING ROSES GROWN AS STANDARDS (P. G.).—The first season such Roses as *Grüss an Teplitz*, *Ards Rover*, *Climbing C. Testout*, &c., grown as standards should be pruned back to about eight inches or ten inches from the point where budded. In later years the yearling growths may be left quite a considerable length, varying from 1 foot to 3 feet. By pruning fairly hard the first year we lay the foundation for a good spreading head, which is most desirable for this type of plant.

PRUNING CLIMBING MRS. W. J. GRANT (A. W. W.).—If you prune this Rose back hard it will not climb at all. The best plan is to allow it to grow unpruned for a time. Just shorten the laterals back to one or two eyes. You might cut down to the ground one or two of the five rods. This would induce it to break at the base. Dorothy Perkins produces much finer clusters if the laterals are pruned back, the very smallest to one or two eyes and the stronger to 12 inches or 15 inches.

WHITE DOROTHY PERKINS AS A TRAINED PLANT (M. E.).—Pot up at once a nice bushy non-root plant and cut back its growth to about eighteen inches. When the new shoots are a fair length, put split canes in the side of the pot and bend them into a balloon shape or in a pyramidal form. Now take the young, pliable growths and tie them on to the canes. You can bend these growths about in any manner, and they will soon form the desired shape. A wirework frame would, of course, be better, and this can be soon made by a handy man. What would be better still would be for you to purchase a bushy plant in a 6-inch or 7-inch pot, and then put this into a larger pot, say, a 9-inch. You could then commence to train the long growths at once, and have some bloom this year. Plants raised from cuttings, put in in September and transplanted once, make ideal bushy specimens to pot up for this work. The plants are cut back when transplanting to about one foot from the ground, so that when lifted in the following autumn they have eight or ten shoots that will form a nice specimen at once.

THE GARDEN.

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APRIL 20, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden W.C.

NOTES OF THE WEEK.

Grape Hyacinths as Cut Flowers.—Common and easily grown as are the Muscaris, or Grape Hyacinths, few use them as cut flowers. They look very pleasing when cut, however, and are at their best when placed in glasses or bowls about a foot high and arranged with their own foliage. They should be strongly grown, and a rich, rather well-manured soil will give larger and finer spikes. They are frequently used in some good places, where scarcer and more expensive flowers than the Muscaris are available. *M. botryoides*, the common Grape Hyacinth, is the best.

Cineraria Matador.—Two years ago this Cineraria, from its distinct and effective colouring, aroused a considerable amount of interest. Since that time it has gained many admirers, and is now largely grown. What is more, it can be confidently recommended to those who have not yet taken up its culture. It belongs to what is generally referred to as the florists' section of Cinerarias; that is to say, the plants are dwarf, with large, massive heads of flowers. Their colour is the most notable feature, and an extremely difficult one to describe. Perhaps soft velvety red expresses it as well as anything, though we have seen it spoken of as a terra-cotta scarlet. At all events, it is a marked break away from the tints usually met with.

Coronilla glauca Flowering Outdoors.—We were interested to notice this charming plant flowering outdoors when calling upon Mr. C. Wakely, the County Horticultural Instructor for Essex, last week. The plant in question is in Mr. Wakely's private garden at Chelmsford, in a small border at the south side of the house, and has been outdoors, unprotected, all the winter. It is about a foot in diameter and of a similar height, and is well clothed with its bright golden yellow, Pea-shaped blossoms. The foliage is not so glaucous as is usual on plants grown in the greenhouse, and the habit is more compact. *Coronilla glauca* can be, and is, grown outdoors in the Western Counties, but it is not usual to find it in the open in the London district.

Primula Sieboldii in Spring Beds.—This delightful Japanese Primula enters largely into the composition of one of the most striking of the spring flower-beds at Hampton Court. The bed is planted with Auricula King of the Yellows and this Primula alternately, while disposed over the entire surface is that pretty pink Tulip Cottage Maid. At a little distance this bed presents a decidedly novel tone of colour, and it is seen at its best when closely inspected and reviewed from above. In some seasons the flowers of Primula Sieboldii are apt to be damaged by inclement spring weather, owing to which they are frequently

grown under glass and employed for greenhouse decoration. For this purpose they are well suited, as there are now many distinct and beautiful varieties, while, what is more, they, both in foliage and in flower, stand out apart from the many grand Primroses that we have now in our gardens.

Muscari conicum.—Visitors to Kew during the Easter holidays found a great source of attraction in a large group of this showy bulbous plant growing beneath tall-growing shrubs in the vicinity of the Tea Pavilion. In a recent issue we directed attention to its use in the same garden as a carpet plant for a bed of the white-flowered Magnolia stellata, when the intense blue of the Muscari contrasted finely with the glistening flowers of the shrub. Since that time we have noted it used with equally good effect in other instances for carpeting beds of shrubs, and consider that it is a plant worth noting by people who are on the look-out for subjects for that purpose. Its culture is of the simplest, for if planted in moderately light ground it gives no trouble, but goes on increasing year after year with considerable rapidity; in fact, if the bulbs are placed 4 inches or 5 inches apart in the first place, they will be so thick as to need lifting and dividing by the end of the third or fourth year after planting. It has the advantage of the leaves dying down early; therefore it does not interfere with the weeding of the beds throughout summer. Although we have not tried it among grass, there appears to be no reason why it should not succeed where the turf is moderately thin.

Destroying Pond Weeds with Copper Sulphate.

The current issue of the *Kew Bulletin*, published by Messrs. Wyman and Sons of London, contains some useful information relating to the destruction of the scum-like weeds which are usually so troublesome in ponds during the summer. The proportion of copper sulphate used in the smaller ponds at Kew is one part to from 750,000 to 1,000,000 parts of water. It is first necessary to ascertain, approximately at least, the cubic contents of the water to be treated. The sulphate of copper should be obtained in a pulverised state, placed in a porous bag and dragged through the water until dissolved; or it may first be dissolved and then sprayed evenly on the surface, provided no Water Lilies or similar plants are present. It is mentioned that in St. James's Park for two summers the water has been kept free from scum by this method, and that the fish are not harmed thereby and are, indeed, free from a fungus that used to attack them badly before the copper sulphate was used. If it were used in larger proportion than recommended, it is probable that fish would be injured. Where the water from a pond is used for watering non-aquatic plants, it is advisable not to use the copper sulphate, except on a tentative scale.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Incarvillea Delavayii in Stiff Soils.—Too many people find that the handsome *Incarvillea Delavayii* becomes lost after a year or two through the roots rotting off. This is especially the case in stiff soils, and those who have such may well try the practice which has proved good with a few cultivators. This is to plant the roots in a raised mound of sandy soil, serving not only to keep the roots drier in winter, but allowing them to ripen better after the foliage dies down. In cold, wet soils this is particularly desirable.—A. M. D.

Single-Flowered Camellias.—"H. P.," page 154, issue March 30, refers to the variety *Apollo* in his note. I have seen some magnificent blooms of this variety, which were shown in a bowl at the recent spring show in Bournemouth by Walter C. Clark, Esq. The tree commenced to flower about March 1; it is growing in Mr. Clark's garden, and the flowers exhibited were faultless. It is certainly the finest variety I have ever seen, and for nearly thirty years I have been closely interested in, and associated with, the *Camellia* as grown in the open air. More plants should be grown, as even when they do not flower they form very handsome shrubs in the garden.—G. G.

Hyacinthus lineatus.—I much regret that the photograph which appeared over this name in *THE GARDEN* of April 6, page 169, is not that of *H. lineatus*, although the bulbs were received from a source which is usually most reliable, and the name has not been questioned until now. The authorities at Kew have kindly pointed this out, and the plant figured appears to come near *H. azureus*. It is, however, much earlier and hardier with me, and the leaves are broader and more numerous than those of *azureus*. There is, it appears, some conflict of statement regarding the synonymy of *H. azureus* and *H. ciliatus*. In the "Index Kewensis" *azureus* is referred to *ciliatus*, and in Nicholson's "Dictionary of Gardening, 1900 Supplement," *azureus* is said to be a synonym of *ciliatus*. The "Kew Hand List" has, however, the two as distinct.—S. ARNOTT.

The International Horticultural Exhibition.—A somewhat modest paragraph which appeared on a back page of *THE GARDEN* last week gives some rather belated information respecting this great exhibition, and not much of that. Does the executive realise that the date of that show is but five weeks distant, and that, if general interest in it is to be aroused, the Press, and the horticultural papers especially, should be furnished with the fullest information relating to the show every week? I do not think it is important to tell readers how many Orchid entries there will be or how many jurors are to act. What is wanted is information as to whether there will be reduced railway fares, both for visitors and for exhibits; what facilities to enable the show ground to be easily and directly reached from all the great London termini; what will be the caterers' charges on the ground; when will subscribers, Royal Horticultural Society's Fellows and gardeners' tickets be issued; also will there be provided a ground plan of the exhibition showing the position of each section of plants or exhibits? I was asked the other day how to reach the show from Liverpool Street, and I could not tell. I trust ample provision will be made for London as well as for provincial transit.—L. S. D.

Beautiful Flower Combinations.—One of the best plant combinations that have come under the observation of the writer was, as your correspondent "P. H." suggests on page 154, March 30 issue, the result of an accident rather than a studied scheme. In the forefront of a border some forty yards long was a row of blue *Lobelia*. Immediately behind was a line of Golden Feather (*Pyrethrum selaginoides*). This was followed by a line of *Calceolarias* (yellow) and *Ageratum* (mixed). Following this was a row of Sweet Williams with a backing of Gardener's Garter Grass (*Dactylis glomerata*). The flowers showed up exceedingly well with the light background given by the *Dactylis*, while the Golden Feather seemed to enhance the colour of the *Lobelia*. All the subjects mentioned succeed admirably beneath the shade of trees, very often the most difficult positions to furnish satisfactorily.—HORTON PARK.

The American Rose Society.—I see from a contemporary that this society is making arrangements to establish a public trial and testing ground for Roses, on similar lines to those at Bagatelle Garden in Paris, to be situated at Hartford, Conn. Surely after this British rosarians will not be slow to establish such a trial ground. It would be of great assistance to all concerned in enabling a just estimation to be arrived at regarding any novelty either in commerce or about to be put into commerce. The garden should be situated upon a good Rose soil, where full justice could be given to the varieties sent for trial, and every novelty procurable should be planted. If this were done, many beautiful introductions would not be lost to us, as they are to-day, owing to want of a full acquaintance of their merits, while, on the other hand, puffed-up introductions would also obtain their reward if not found worthy.—W. EASLEA, *Eastwood, Essex.*

Primula Gillii.—This is the name—provisionally given, I believe—of a new species from the High Himalayas, which, when exhibited by Messrs. Gill and Sons, Falmouth, at the Royal Horticultural Society's meeting on the 2nd inst., was at once the idol and delight of all hardy plant enthusiasts, none of whom had seen its like before. That fact alone might almost suggest the idea of a species nova, though there is no telling what may not exist in the unknown or little-known archives of herbaria. The plant itself is of the miniature order, and in all probability belongs to the deciduous section of the genus, of which *P. cashmiriana* might be cited as an example. The developed rosette of leaves, horizontally disposed, had a diameter of about two inches, the stem terminated by a capitate umbel of drooping, bell-shaped flowers. The leaves and stem are glandular pubescent, the former rather soft to the touch, and suggestive of those of the Cowslip in youth. The nodding flowers are about two-thirds the size of *Campanula pulla*, of almost royal purple shade without and violet blue and white within, the latter colour occupying about one-half of the base of the corolla. The flower-buds are of deep indigo. A peculiar, if not, indeed, unique, charm is the fringed character of the bells, which, so far as I know, has no parallel even in this remarkable and diversified genus. My only criticism is directed against the present name; and, assuming it to be a new species, one would prefer to see the far more appropriate and suggestive one of *P. soldanella-flora* adopted in its stead. The plant itself is a gem.—E. H. JENKINS.

Primula capitata.—I have been interested in Mr. Malby's excellent article on *Primula capitata* in *THE GARDEN* for April 13, page 183, but I do not agree with him when he expresses surprise at the fact that *capitata* is not more universally cultivated. As he says, *capitata* is a truly beautiful plant. The corolla is of the true Tyrian purple, and it shows up so very vividly against the mealy white farina of the scape and calyx tube. This striking effect is particularly noticeable when it is grown in the mass. However, its value to the practical gardener is somewhat depreciated by its unfortunate propensity for dying soon after flowering. I have had considerable experience of its habits, for I have reared many hundred plants during a period extending over several years, and I find that it flowers well either in pots, in cold frames, or in the open ground; but it is a bad perennial owing to the tendency I have just referred to. It is grown from seed, and it is always impossible to prophesy of any individual plant whether it will last or not after flowering. It resembles *littoniana* and *cockburniana* in this particular, and it is obvious how its value is lessened on this account.—JOHN MACWATT, *Morelands, Duns.*

Double Primroses.—I started to read Mr. Macwatt's article on these flowers (page 183, April 13) with considerable anticipation. I had hoped that, writing from the Northern and, for the Primrose family, highly-favoured locality of Duns, he would have described of his own growth many rather uncommon varieties doing well with him. But the final result of the reading was disappointment, because the writer had to tell us that even with him the drought of last summer was so disastrous that there is likely to be a great scarcity of double Primroses this year. It is just that heat and drought which, not content with roasting up double Primroses here in the South, seriously affected Polyanthus also, and a winter of unusual rainfall following, has in many places generated a fungoid attack which has proved either weakening or destructive. But though double Primroses grew so freely in Scotland, we have here in the South for many years experienced the greatest possible difficulty in keeping even the commonest varieties alive. I can well remember, from thirty-five to forty years ago, that in Middlesex the Double White and Double Lilac were grown profusely in the market gardens to give flowers to gather for bunching and sale. But no such plants can be seen now. My late brother, R. Dean, at great trouble and expense got together a collection of twelve varieties, including the Crimson or Pompadour, Purple, Scotch Purple, Rose, Cloth of Gold or Giant Yellow, Croussi, A. Dumollin, White, Lilac and Sulphur, these last three being the best growers, but the others were most difficult to keep alive, even in the greatest shade and coolest place; indeed, they would soon become less, then die. Once in cottage gardens clumps of the White and Lilac, with those of the Hepatica, were very common. Who sees them now? They have succumbed to dry summer heat, which is so very inimical to the leafage, breeding thrips and red spider, which sucked it dry. I note that a few groups of doubles are planted out each year at Hampton Court, but they produce no good effect. We may regard them Southwards, in any case, as old favourites which have done their work, and now have to give place to other things. Double Polyanthus down here are just as difficult to grow as Primroses.—A. DEAN.

The Origin of *Saxifraga apiculata*.—Referring to the origin of *Saxifraga apiculata* as commented on in your issue of March 29, may I say that I found this plant near Luz, in the Pyrenees, a few years ago, and it is quite indistinguishable from a plant sent to me under the same name from a leading English alpine-grower. The only difference was that at first my Pyrenean plant had a very slight encrustation, which has in the course of a few years' domestication practically disappeared.—L. H. EVANS, *Holme House, Canterbury*.

Rhododendron dauricum in the North.—A nice plant of this early *Rhododendron* has been very fine this year in the gardens of Troup House, Banffshire, the property of Mr. A. W. Garden. A plant some 5 feet or more in height gave a great profusion of bloom and was very fine indeed. There are two forms of this *Rhododendron* in cultivation, one being much later in flowering than the other. That at Troup House is the early one, and was in flower in February, not a bad record for what is considered a cold part of the United Kingdom, although near the sea.—SHRUBLAND.

The Variegated-Leaved Broom.—A long way short of the best varieties of the ordinary yellow Broom of the waysides and fields, so far as regards freedom of flower, is the variegated-leaved variety. It is, however, as a spring plant that it is most valued, as then the young growths and buds are of a bright and effective yellowish hue, and at a little distance it gives one the impression of being in flower. It is a plant which is amenable to clipping back after flowering, so as to prevent it from becoming leggy and scraggy, and when so treated can be made to assume a neat, yet not formal shape.—A. M. D.

The Hardy Brooms.—I was much interested in the article under the above heading in the issue of March 30, page 159. Undoubtedly, when grown in masses, these plants are most effective. I do not wish to refer to varieties, as the references in the article named are so clear and useful, but to the fact that the plants do not withstand lifting and replanting very well when they are large. In the New Forest district of Hampshire grand results are obtained from seedlings, which are never disturbed, the plants flourishing in a few inches of peaty soil on a gravel subsoil. The white Broom looks lovely in the woods.—B.

Summer Bedding Flower-Schemes.—"A. D.," page 154, issue March 30, has some very interesting comments on Mr. C. Turner's arrangements of pink Sweet Williams and Canterbury Bells, issue March 16, page 130. It is a very important matter, when several kinds of flowers are associated in the same bed, that they have flowering periods of about equal length. For many years I used to bed out annually nearly thirty thousand plants, and always endeavoured to select kinds that would flower for a long time. Once I was requested to make certain alterations and include Ten-week Stocks and other kinds still shorter-lived as regards flowering. The attempt to introduce a change of this kind was a failure, as the beds formed part of a big scheme of colour contrasts and harmony. Few plants excel *Violas*, *Phlox Drummondii*, hybrid *Verbenas* and *Dianthus*es for long-period flowering if spent blooms be regularly removed. As top or dot plants to carpets, *Fuchsias* are excellent. The dwarf Evening *Primrose* as a groundwork, with *Nicotiana affinis* as dot plants, would answer a useful purpose. Single-flowered pink *Petunias* and dot plants of *Heliotrope* are lovely. No

edging is necessary. If one is preferred, use white *Violas*.—SHAMROCK.

***Prunus triloba*.**—This beautiful member of the Plum family, so eulogistically referred to in THE GARDEN for April 6, merits everything that can be said in its favour. It is, however, a great pity that for permanent planting it is so difficult to obtain plants on their own roots, as the usual method of increase in nurseries is to bud or graft them on to the common Sloe, the suckers from which are a continual nuisance. Undoubtedly this mode of propagation ensures saleable plants in less time than any other, and thus enables them to be sold cheaply. Plants on their own roots would be appreciated by many, and though, owing to layers or cuttings taking a longer time to attain saleable size than grafted or budded plants, the price would, of course, be somewhat



THE NEW *PRIMULA GILLII* (NATURAL SIZE).
(See page 190.)

higher, a good demand for them would be certain. The same remarks will also apply to the pretty little *Prunus japonica* or *sinensis*. None of the above roots readily from cuttings, though I have had a fair measure of success from the young shoots pushed out by forced plants in early spring.—H. P.

FORTHCOMING EVENTS.

April 23.—Breconshire Daffodil Show. Lincolnshire Daffodil Show.

April 24.—North of England Horticultural Society's Show at the Corn Exchange, Leeds. Lantern Lecture on "Mendelism," by J. M. Hector, Esq., B.Sc. Royal Botanic Society Meeting.

April 25.—Midland Daffodil Show at Birminghams (two days). Norfolk and Norwich Horticultural Society's Spring Show. Falmouth Spring Show (two days).

DAFFODIL NOTES.

GROUPS AT SHOWS.

I HAVE read with much interest the remarks in recent issues of THE GARDEN of Messrs. Herbert Chapman, C. Bourne and W. A. Watts with regard to the arrangement and judging of Daffodil trade groups at the Royal Horticultural Society's Tuesday shows, and as one of those who on every occasion this year have acted as judges, I would like to make some observations with regard to the same.

First, it should be noticed that I have said "trade groups at the Royal Horticultural Society's Tuesday shows." This is important for two reasons; primarily, because I take it to be what each correspondent means when he talks of groups, and, secondly, because there are differences between trade group staging and competitive flower staging, which must be obvious to anyone who gives the question a moment's thought. The latter is a fairly simple matter. Practically, there is only a sort of "Hobson's choice" about it, and for competitors and judges everyone must allow that it is well it should be so. The alternative would be chaos and doubly confounded confusion, and profound perplexity and head-scratching with certain baldness to follow, among these principals in the fight.

With trade groups at shows it is different. There is no "Hobson's choice." There is no general consensus of opinion as to the standards of excellence which should instinctively guide those who are called upon to judge. Every man is a law unto himself, and both the chairman and secretary of the Daffodil committee must this season have voted Jacob a bit of a worry on this very point. I quite agree with Mr. Chapman on the need of a "definite pronouncement."

Secondly, now the season is over and there are no more groups to come *sub judice*, I would like to put forward certain considerations which must be taken into account, and to some extent settled, before any general consensus of opinion is possible. The difficulty is the same as that which confronted a certain Member of Parliament about the "minimum wage," who said, "My difficulty is not in saying that there should be a 'minimum wage,' but in saying what that 'minimum wage' should be." So say I of the standard of judging. There should be one, but what it should be is my difficulty. After much thought I have pretty well decided that it must be "the Golden Mean." I give a list in question form of points that must be considered and, if possible, answered:

(a) What is the purpose of a trade group at all? To expose wares for sale, old and new? or to make a grand bank of harmonious beauty either as an individual gem, shown, as it were, on a paper, apart from any setting, or as one among the many that together make the exhibition?

(b) How much to the good should new and rare blooms count?

(c) Which is better from the point of view of the public: a lot of old standard varieties that are purchasable by ordinary people, or some of the very latest out which are either unpurchasable or which must of necessity only be the specialist's flower?

(d) Which is the most attractive way to arrange individual vases, seeing the highly artificial surroundings of a British (in contradistinction to a Continental) show? "Hit-you-in-the-eye" or higgledy-piggledy?

(e) Should the separate excellence of each unit of the whole or the *tout ensemble* of the group weigh most?

And so on and so on. There are lots of other things that I could conjure up; but enough is as good as a feast, and I am sure I have given the most voracious appetite sufficient to digest at a single meal.

JOSEPH JACOB.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

Seedling Plants.—Young plants from seeds sown in February should be in excellent condition for potting, and if the suggestion to sow very thinly were adopted, the task will not prove in any sense a tedious or a difficult one. It will be found extremely easy to secure a capital ball of soil attached to the roots of each one, and that alone goes far to ensure success. The compost should consist largely of good loam. The addition of a little leaf-mould, however, is desirable, and coarse sand is essential to keep the soil sweet and open. It is necessary to water with more than ordinary care for a short time after the moving.

Sowing Seeds.—From some points of view at least, the month of April is the most favourable for seed-sowing, and no one, even with the most primitive of conveniences, should fail to raise splendid plants which will flower magnificently in the succeeding year. All the youngsters will not yield flowers of superlative merit; but the leading seed merchants who advertise in the pages of *THE GARDEN* have brought their strains to so remarkable a degree of perfection that the proportion of fine varieties is very high. Pans filled to within an inch of the rim are the best for the seeds, and the surface ought to be made firm and level prior to setting the seeds so widely that the necessity for thinning will be wholly obviated. A frame or a cool greenhouse will serve for the pans, and failing either of these structures, put the pan on a window-sill with a pane of glass over it; if the soil is kept pleasantly moist, satisfaction is certain to follow.

Planting.—Generally speaking, the planting out from frames will have been completed at the end of March, but April is none too late, especially in cold, low-lying districts. It is necessary to make the soil of the bed or border friable by the most thorough cultivation, and the desirability of incorporating crushed mortar or lime rubble freely cannot be questioned, while, if the ground is on the poor side, some well-rotted manure is required. In all circumstances I prefer cow-manure for Carnations and Picotees, and particularly so on light lands, but as far as this is concerned, the majority of amateurs have to use what

they can get and be proportionately thankful. However, it is most important that the planting shall not be delayed a moment longer than is absolutely necessary, as the plants will secure an infinitely better foothold than if they are moved in May, when the soil has become really warm, and perhaps in some instances dry.

Established Plants.—Unless the conditions are peculiarly unfavourable, there can be no doubt that autumn planting is the best. Perhaps one ought to say summer planting, since August or early in September, immediately after the layers have produced an excellent set of roots, is the ideal time. By the spring the roots will be in perfect condition, and correct attention will preclude the possibility of failure. The surface of

Therefore I am not in favour of spreading it until the middle of May at the soonest, and if it is deferred until the end of that month, gain rather than loss will be the result. In the possible event of heavy rains following early application, it will be necessary to prick over the manure with a fork two or three times to prevent it from settling down into a close, wet mass.

F. R.

WORK AMONG THE CHRYSANTHEMUMS.

Young Plants that are healthy will grow very rapidly now, and much care must be taken with them to prevent weakly growth. It is a fact that hundreds of fine plants are spoiled at this season through neglect, but not without neglect. The cultivator sees his plants growing well in 3-inch pots and is content to watch them for a time; too long, as a rule, for their well-being. A 3-inch pot does not contain much soil, and when roots have been made freely the soil quickly dries, and, moreover, the nourishment in it is soon exhausted. Up to this stage the stem and leaves have grown to a fair size, and if the plant receives a check, the sap-vessels contract, the stem hardens and the leaves cease to swell as before.

In due course the plants are repotted and once more growth is active, but the cultivator will notice in after-days that both stem and leaves near the bottom of the plant are smaller than the stem and leaves higher up. Now, a well-grown plant must possess a thicker stem near its base than at the top, and the leaves should be correspondingly large. Do not be content to allow the young plants to remain too long in the smaller pots, but carefully and frequently examine their roots, and, directly the latter are sufficiently numerous in the pot, transfer them to a larger one, and thus keep every plant progressing. It is by picking out the plants in this way that the good health and general condition of the whole batch is maintained.

Early Feeding.—If through any cause the amateur cultivator cannot report his plants when they need it, he should not hesitate to assist growth by judicious feeding. Some cultivators do not believe in feeding before the large

pots are full of roots. If necessary, feed at any stage of growth. It is better to feed a little than to allow a plant to deteriorate in health. All plants intended for conservatory decoration, or for the production of large specimen blooms either in groups or in a cut state at shows, should now be repotted in 5½-inch and 6½-inch pots without delay when there are sufficient roots in the old ball of soil to warrant it.

Cuttings Rooted in February should be placed in large 60 pots forthwith, and those propagated early in March must be transferred to small 60's without delay, thus keeping every batch steadily growing.



FLOWERING SHOOT OF SPARMANNIA AFRICANA, A USEFUL COOL GREENHOUSE PLANT.

the soil must be kept loose and open by persistent hoeing, or, if that operation is regarded as in any degree dangerous, by pointing lightly with a stick or small fork. This will encourage the admission of water and air, and conserve the food in the ground. The desirability of a surfacing of short manure cannot be questioned in the majority of soils, but it is commonly applied so early that the full benefits derivable from it are not secured. It should be utilised, not exclusively, as many people appear to suppose, to keep the soil warm, but to keep it cool, while at the same time providing a little readily available food for the plants.

The First "Break": What It Is.—The first "break" is caused by the bud forming in the point of the shoot. This bud arrests the continued growth of the stem and main leaves on it, and, as a result, some tiny side shoots form near the point just below the bud. If three or four large blooms are required on a plant, the same number of young shoots are retained, and they, in turn, will bear buds which are called first-crown buds. A plant produces, naturally, a break early in the season; then a crown bud during the latter part of July, in August or the early part of September (according to the variety, whether it be early, medium or late); and, finally, a terminal bud, or cluster of buds, in September and October. Some varieties do best when early crowns are secured, others when late ones are "taken," so the cultivator must become well versed in the treatment of each variety, so as to get the very best flowers from each.

Varieties to Stop in April.—Few varieties show their first break in April, except the very early ones, and, when these do so, new shoots must be taken on and new buds allowed to form to cause a later break—say, in June—or, failing buds at that time, each plant must be stopped. In April the following varieties should be stopped and first crowns (in August) taken from them: Mrs. J. Thornton, Edith Jameson, Mme. Rivol, Mme. P. Radaelli, Hon. Mrs. Lopes and Captain Mitford. The first two named should be stopped early in the month, and the others near the end of it. The following varieties may also be stopped in the Northern Counties during the last week in April: Frank Payne, Mrs. W. Iggulden, Bessie Godfrey, Mrs. Charles Penford, Duchess of Sutherland and Master David. Chrysanthemum cultivators will be busy now and onwards. AVON.

THE GREENHOUSE.

FLOWERING PLANTS FOR THE WARM GREENHOUSE.

(TYDÆS.)

FOR some reason or other, Tydæas (or are they Isolomas?) have their merits very generally overlooked, as not only are they very beautiful when in flower, but their bright-coloured blossoms may be had throughout the greater part of the year. They are near relatives of the Gesneras, and, like most of this last-named genus, the underground system consists of curious caterpillar-like rhizomes. To get them in flower during the summer these rhizomes should be potted in February and brought on in the temperature of an intermediate house, where they will grow freely. Cuttings of the young shoots strike readily in a gentle bottom-heat, and the plants so obtained afford a succession to the earlier ones; in fact, in a temperature of 60° to 65° they will bloom more or less continuously throughout the winter and, given a little stimulus, with renewed energy in spring. The quaint markings of the flowers of many of them form a very noticeable feature. A selection of good varieties can be obtained at a cheap rate, especially when dormant, or seeds from a reliable source will give a good variety. The seeds must be treated like those of Gloxinias. Like most gesneraceous plants, a liberal amount of leaf-mould in the potting compost is very helpful to Tydæas in general. H. P.

THE AFRICAN HEMP.

(SPARMANNIA AFRICANA.)

A FAVOURITE and easily-grown plant, the African Hemp is often seen in gardens, where it is grown for greenhouse and conservatory decoration. It is an arborescent shrub, often between 10 feet and 20 feet in height. The leaves are heart-shaped, soft and pubescent, not altogether unlike those of the common Lime, to which family it belongs. The flowers are very attractive; the petals are white and the stamens golden. April and May are, as a rule, the best flowering months; but this year the trusses of flowers have been produced earlier than usual. As a matter of botanical interest it is worth noting that the prominent stamens are sensitive to the touch. *Sparmannia africana* appears to thrive best in a compost of loam and peat. It may be increased from cuttings inserted in sandy peat under hand-lights or in a propagating-case, but this can only be

Although the difference in size between the two extreme forms is very great, they are connected in sequence by numerous intermediates so close that it would be difficult to define a line separating named varieties. The only justification for the varietal name given to the plant illustrated is that of colour. It is the first form of this species that I have seen which has departed from the typical beautiful white which is characteristic of it. It is called *S. burseriana elegans*, and has bright rose-coloured buds and pale lilac flowers; otherwise it is in every respect identical with intermediate forms in foliage and habit. This plant appeared among a batch of seedlings raised from seed saved from *S. burseriana macrantha*. It may be merely a sport, but it is more probable that one of the red-flowered species had some influence, in that the flowers of the seed-bearing plant may have been cross-fertilised by some insect.

As may be seen by the illustration, it is a free-flowering plant as well as a vigorous grower,



THE RARE SAXIFRAGA BURSERIANA ELEGANS WITH ROSE-COLOURED BUDS AND PALE LILAC FLOWERS.

successfully carried out under glass where bottom-heat is at command.

being larger than any other in the same batch of seedlings. W. I.

THE ROCK AND WATER GARDEN.

A ROSE-FLOWERED FORM OF SAXIFRAGA BURSERIANA.

THE beautiful *Saxifraga burseriana* is a most variable plant, and this fact has been the incentive which has given rise recently to such a number of named varieties, such as *grandiflora*, *Gloria*, *magna*, *speciosa* and *tridentina*, all slight variations from *S. burseriana major*, which was sent out, I think, by Mr. Selve Leonard from the Guildford Hardy Plant Nursery many years ago. Besides the size of flower there is also much variation in the time of flowering, and, speaking generally, the larger forms seem to come into flower earliest, while *S. b. minor* is one of the latest in bloom.

A BEAUTIFUL ROCK GARDEN PRIMROSE.

(PRIMULA FRONDOSA.)

ONE of the most dainty and charming of the Primulas which favour us with their blossoms during April is *P. frondosa*. It is really delightful to see a colony of these diminutive plants nestling under the lee of some brownish-coloured stone, which accentuates the brightness of the rosy flowers and soft green leaves, while here and there, where the backs of the leaves are exposed to our view, they gleam in their vivid whiteness, owing to a heavy deposit of farina thereon. In general aspect this Primula is very similar to *P. farinosa*, except that it is larger and more robust. The leaves, too, are broader than in its smaller relative. The chief advantage it has, at least with me, is that it is a much better perennial. As a rule, no matter what treatment I give it, *P. farinosa* is little more than a biennial, but *P. frondosa* is

much more reliable in this respect, and may be divided after flowering.

It is well, to raise it from seed every few years, and so introduce that vigour which almost invariably accompanies seedling plants. As in the case of the Bird's-eye Primrose, *P. frondosa* dies down to a farina-covered bud in the late autumn, and so remains, usually till mid-March, when it opens and rapidly develops, throwing up its farina-covered stalk, bearing a truss of dainty star-like pink flowers, in a surprisingly short time. With me it thrives in a fairly moist vegetable soil, with loam, sand and grit added, while I generally place about the plants pieces of sandstone half buried in the earth to prevent too rapid evaporation.

As with *P. farinosa*, though in this case in a lessened degree, the frost is much inclined to lift the plants from the soil, and when the thaw comes it is well to go over the plants and gently press them down, if necessary adding a little more soil.

NOTES ON TULIPS.

TULIPS AT THE ROYAL HORTICULTURAL SOCIETY'S SPRING SHOWS.

AT the Forced Bulb Show there was but little novel to chronicle in the way of Tulips. Two fairly new ones, *De Wet* and *Alice Roosevelt*, came before the committee for awards, but without result. *De Wet* is a lovely orange sport from *Prince of Austria*, retaining the same graceful habit and shape of flower. It had already received an award of merit. Some day, when in rather better condition, it may receive the coveted "step." The *Prince*, its other self, is the Tulip I would choose to live with if my choice were to be confined to one variety, just as I think the *Raspberry* would be the one among the fruits—fresh Raspberries, Raspberries and

the variegated-leaved *Yellow Prince*? Here, too, the colours blend.

The premier award of the day—a silver-gilt Banksian medal—went to the large group of Messrs. R. and G. Cuthbert of Southgate, which filled almost the entire end of the hall. The flowers were arranged in more or less round little groups on the floor; but to me the whole effect was too bizarre, and the pots sadly wanted covering with Moss or Fern. All the same, the public owe the firm a debt of gratitude for the helpful display of so many varieties. Where would the show have been without this exhibit? I noticed among those in the best condition *Trilby*, a delicate and slender edition of *Brunhilde* (*Unique*); *Vermilion Brilliant*, the brightest and best red for pots; *Couleur Cardinal*, the magnificent rich crimson outdoor midseason variety, which I find comes nicely in pots slowly brought on.

On March 19 this firm staged a collection of *Darwin* and *Cottage* varieties. Speaking from my own personal experience in growing them and from what I see elsewhere, I do not think these latter, as a whole, lend themselves to pot culture under glass. I was, however, impressed with a lovely pale biscuit brown variety called *Clio*. It looked well and retained its shape, and carried its flowers on good stems. *Fairy Queen* was good, too, and the colour shades of mauve, pale pink and yellow were blended in delicate gradations. There were several good *Darwins* that could be picked out, such as *Pride of Haarlem*, *William Copeland* and *Rev. H. Ewbank*. We hardly as yet appreciate the value of this latter type for mild forcing.

It is significant that a very large firm indeed of market-growers who force the early sorts by the million (fact, not writer's romance) are only now beginning to test the different kinds with a view to going in for them in large quantities. One thing they will find, and as it is a thing which private growers should realise, too, I mention it, viz., that to get the *very best* results, none but the largest and best-ripened bulbs should be used. Some day perhaps we will find retail traders advertising such specially-prepared stuff, and if they

do, it will be worth a little extra, and the purchaser will be repaid by the extra pleasure that their fine large blooms will give him.

On April 2 Messrs. Cuthbert and Sons occupied their old position of March 6 at the end of the hall, and put up a similar collection of *Darwin* and *Cottage* varieties to that of the March 19 show. Tulip-lovers owe a debt of gratitude to this firm for these several exhibitions. They are very educative, especially as the plants are shown as grown. The improvement in strength on the second time of asking was very noticeable. This leads me to suggest that there is a time when these pot plants are at their best under glass. Every grower should experiment for himself to find out those two or three weeks when one can catch them in this condition—that psychological period when the stems can be had at their full strength and before the sun has too much power, so that there will not be that flagging of leaves



AN EFFECTIVE GROUPING OF PRIMULA FRONDOSA IN THE ROCK GARDEN.

I have often wondered to what extent this tendency to grow out of the soil (so frequently seen in these two *Primulas*, and also, though in a modified way, in the *Soldanellas*) may be a natural method of preparing themselves for the fresh deposit of humus which, in the mountains, is brought down by the melting snow-water. Often in the Alps one finds such little plants almost buried by this accumulation. It is quite a common experience in my garden, and probably in others, to see *P. rosea* grow out of the ground to a surprising degree, sometimes as much as 1½ inches, and supported on a cone-like arrangement of roots; and often so rigid are they in that elevated position that they are not to be coaxed back into the soil, as is so easily done with *P. farinosa* and *P. frondosa*. When in this state they seem to greatly benefit by a top-dressing of leafy soil, though exactly the same thing occurs the following year.

REGINALD A. MALBY.

maraschino, *Raspberry jam*, bottled Raspberries, *Raspberry vinegar*, *Raspberry jelly*, *sauce Melba*, and possibly other nice things that Mrs. Earle of "pot-pourri" fame or Miss Jekyll of "colour effects" renown could tell us of.

Alice Roosevelt is, I believe, a sport of *Queen of the Netherlands*, with the drawbacks of that lovely variety. Its charm and its novelty lie in its real pink colouring. Another fairly new Tulip was *Brilliant Star*, an almost *Vermilion Brilliant* red, nearly the exact colour of scarlet *Duc Van Thol*, with a yellow and brown base. I have grown it myself this year, and it is a "good thing." A bowl of the variegated-leaved *Royal Silver* (*Silver Standard*) in Messrs. Carter Page and Co.'s group in one of the annexes took my eye. I do not often like the combination of bright flowers and variegated leaves in anything, but in this case they harmonised, and I have put it down for trial next year. By the way, do readers know

and spread-eagling of blooms which are, from the point of view of the looker's-on, so exhaustive. I felt I must make these little digressions while they were in my mind. Little things are big things in gardening, if they are anywhere. I made a note of a good many of those in the best condition on the Highgate firm's stand, and what they have done we can do; hence the value of my list. Velvet Queen, a monster reddish purple, much enquired for during the afternoon; Leonardi de Vinci, a reliable dark maroon; Remembrance, a long, pale dusty purple and mauve; Suzon, exterior blush, interior deep pink, and the style of the better-known Margaret; Mrs. Farncombe Sanders, grand large rose red; Lucifer, shades of reddish orange, reminding one of Thomas Moore, the favourite early; Carl Becker, a new one to me, with long-shaped flowers of a buff-toned pink; Fairy, a large, dull red orange shade, distinct and good; Psyche, pale rosy pink; and although not strictly a Darwin, Feu Ardente, a tall, handsome dark red which lasts particularly well.

A special word for a little lot of fibre-grown plants on Messrs. Bath's stand. I have seldom, if ever, seen better-grown "stuff" anywhere. The varieties were Isis, Pride of Haarlem, King Harold, Bartigon, Nora Ware, Clara Butt, Mme. Krelage, Maiden's Blush and William Copeland.

At this same show Messrs. Cutbush and Co. had a large number of single and double "earlies" in pots. President Taft was a large white flushed and picoteed with rosy pink, very much after the style of the Cottage "Picotee." Cardinal Rompolla was another new one. Brutus is not so often grown as it deserves to be. It has crimson petals edged with orange, and is quite distinct from either Duchess of Parma or Keizerskroon. JOSEPH JACOB.

ROSE GARDEN.

NEW ROSE MRS. E. ALFORD.

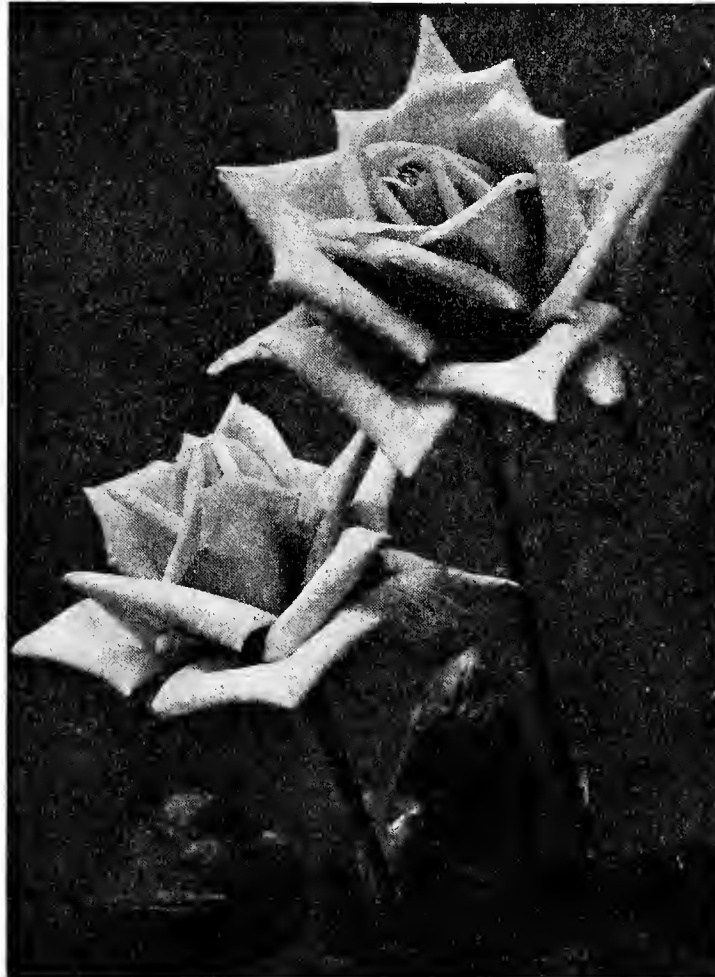
ON this page appears an illustration of the new Rose Mrs. E. Alford, which received an award of merit when

shown by Messrs. Lowe and Sawyer at a recent meeting of the Royal Horticultural Society. It belongs to the Hybrid Tea section, and as a forcing Rose it has many good points. In describing it we cannot do better than reiterate the notes which appeared in a recent issue of **THE GARDEN**: "If we say at once that in this new-comer appears the embodiment of the best attributes of Mme. Abel Chatenay and La France—we know nothing of its parentage, by the way—the reader will get an idea of its distinctive beauty. There are the well-rolled recurving petals of both of these, wedded to a longer and more pointed flower, such as Mrs. G. Sawyer. In the main the

colour leans to a rather pale Mme. Abel Chatenay, but the flowers are handsome and well set up on firm, bold stems. The variety is nicely scented."

SEASONABLE WORK AMONG THE ROSES.

THE few warmer days, together with greater sun influence, have advanced growth rapidly. I note this especially among the Hybrid Sweet Briars, whose fragrance is very grateful so early in the spring. Some of my own, in a sheltered corner, have been sweet since the middle of March. The growth upon wall Roses, and in some other warm spots, is already forward enough to carry visible buds, and is quite thickly infested with green fly. Mildew has also appeared upon some precocious



THE NEW HYBRID TEA ROSE MRS. E. ALFORD.

growth. Both of these enemies can be fought with the usual summer insecticides, which we can seldom use too early after young growth commences. Prompt measures are of the greatest service, and often stay severe attacks that would injure, if they did not entirely spoil, any prospect of early bloom.

Upon more than one occasion I have cut Roses from a warm wall by the end of April. Mme. Falcot, Réve d'Or, Gloire de Dijon and Charles Lawson often come extra early in such a position. This is generally where little pruning has been done and during a season when the young growths have been fortunate enough to escape frost.

Buds, both upon dwarfs and standards, inserted last summer are already pushing up freely. Simultaneous with these we naturally have suckers and side stem growths upon standards. The sooner these can be cut out the better. Their removal is more easy and expeditious when quite young, and they can also be cut out entirely without so large a wound being made.

In the case of standards budded last summer, I would not cut away all of the few eyes that may be growing upon the short portion of shoulder left beyond the Rose-bud. If one eye is left to grow and the point pinched out later, I think it encourages a better flow of sap towards the Rose-bud. When this last has made a good start is the best time to cut away the Briar growth beyond it. This does not apply to dwarfs, for here the whole of the sap from the roots must necessarily come to the bud, having no other outlet.

About the end of the month a little artificial manure may be sprinkled on the soil near to the young Roses, and when the ground is in a suitable condition some of the soil should be drawn up towards the growing bud. In the case of a few plants only, I would place a little well-prepared soil around the base of the buds previous to drawing the surrounding earth to them. This earthing-up assists a better and more uniform swelling of stock and Rose, which naturally conduces to a sounder connection. May should be a very busy month among all classes of Roses in the open. A. P.

TREES & SHRUBS.

YEW FOR GARDEN EFFECT.

IT is astonishing to find how few of the various species of Yews are generally known and planted. The effective value of a collection is very great, especially during the dull months, when they stand, as it were, more prominent to observers. Yews were largely planted years ago, especially in the vicinity of mansions and churches for boundaries. They are most useful for keeping away strong winds, and are as good a protection as a wall and far more ornamental. At Compton Bassett in Wiltshire

there are some enormous hedges as wide over the top as a load of hay, and these are so dense that the men when clipping can walk about on the top. These are on the chalk soil, and have been planted many years. Most of the *Taxus* family are hardy, and therefore should have suitable positions. I give now some good forms.

***Taxus baccata*.**—It is said that the timber of this species is most useful, but takes a long time to dry after being cut, and very little shrinkage is ever observed. Its uses are for very fine tables, and is acknowledged by authorities to be the best wood for cabinets, making better articles than those of mahogany. In Denmark it is said

to grow from 30 feet to 40 feet. The tree is found all over Britain and the greater part of the Continent of Europe.

T. b. depressa.—This is a low, spreading tree, more after the manner of a shrub.

T. b. fastigiata.—Trees of this are always recognised by their upright, column-like growth, and are exceptionally fine when the trees are large. They are apt to spread, but this can easily be rectified by wiring them round about a third of their height.

T. b. aurea (the Golden Yew).—This is very interesting when grown with the green forms.

T. nana (Foxii).—This, the dwarf Yew, rarely grows more than 3 feet high.

T. cuspidata (the Japanese Yew).—This grows to a large size and is more after the style of the common Yew, though the leaves are broader and more abruptly pointed.

T. brevifolia (the Californian Yew).—This is of very open growth, and its foliage is lighter and more feathery than our common Yew. The habit is very distinct. The branches grow as fast in length as the leader increases in height.

Cephalotaxus Drupacea.—This is a straggling shrub, but evergreen and of much interest. It is sometimes called the Plum-fruited Yew. This comes from China and Japan.

C. Fortunei.—This has the finest foliage of all the species. The leaves, when well grown, are about three inches long.

C. pedunculata.—This is a choice evergreen, and ought to be planted with the two former for comparison. The leaves of this variety are 1 inch to 2 inches long, bright green above, with two broad, glaucous lines beneath.

Torreya (the Fetid Yew).—This is a genus of evergreen trees which have not been very generally taken up in Great Britain, probably on account of being such slow growers; but the reason may not be far to seek. As is the case with many choice evergreen shrubs, they may have been raised from cuttings, when, as is well known, they develop a branching habit instead of going upwards. The young foliage of these trees when bruised emits a disagreeable odour; hence their name the Fetid Yew. *T. grandis*, *T. Myristica* and *T. nucifera* are the species usually grown in botanical collections.

Saxegothea conspicua (Prince Albert's Yew).—This is seen in collections in sheltered localities and is a very interesting shrub, a low tree with spreading branches, densely clothed with foliage of a lighter green than our common Yew; it grows from 20 feet to 25 feet high.

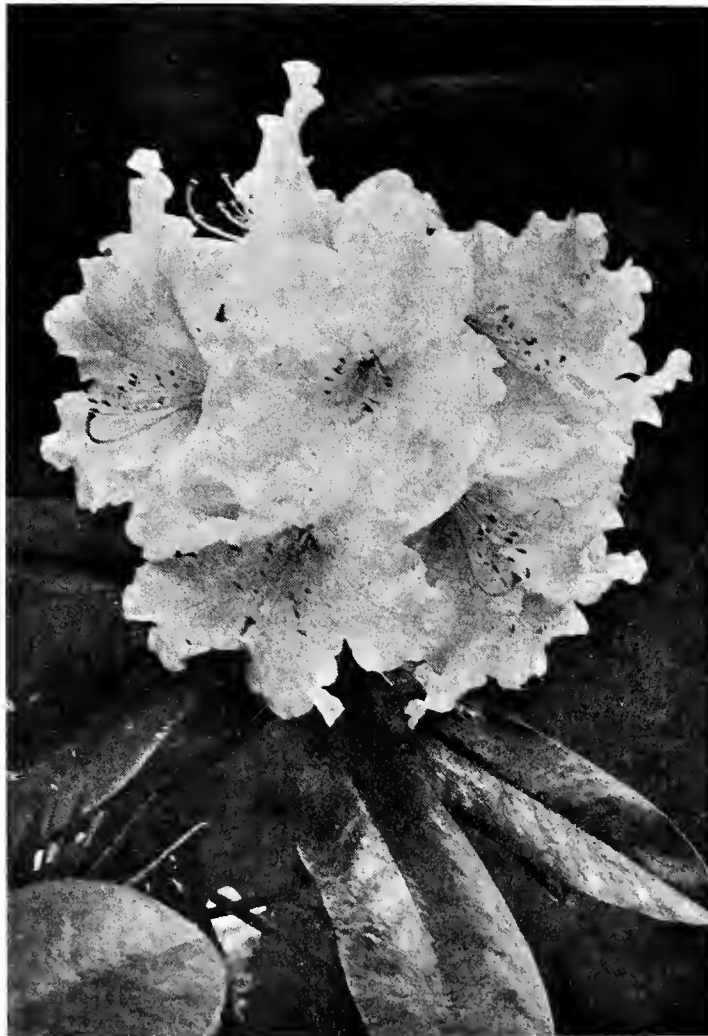
Prumnopitys elegans.—An ornamental tree and very distinct. Its popular name is the Plum-fruited Yew of Chili. This has proved hardy

in many places in Great Britain and grows fast in some districts.

Podocarpus.—This genus includes an unknown number of species. These are distinguished by the leathery deep green leaves, which in most cases of the species are linear.

P. alpinus.—This grows 10 feet high on the Australian Alps in Victoria, and in Tasmania.

P. chilina.—This grows much more rampantly and from 40 feet to 60 feet. The leaves of this are 2 inches to 3 inches long, deep green, and very shiny and glossy.



FLOWERING BRANCH OF RHODODENDRON ISABELLA MANGLES, A BEAUTIFUL VARIETY WITH ROSE PINK BLOSSOMS.

P. macrophyllus.—This is a beautiful distinct evergreen, with numerous branches, which are clothed with pale green leaves 3 inches to 4 inches long, tapering at the base and pointed at the apex. Where it does well it is extremely beautiful. It requires shelter from cold, cutting winds.

Daerydium Franklinii.—This is one of the most beautiful shrubs, and sometimes called the Huon Pine of Tasmania, where it attains a height of 100 feet. The branches are rather short and grow horizontally from the trunk, but the extremes are slightly pendulous. The scale-like leaves

resemble one of the *Arbor-vitæ*. The timber is said to be close-grained, durable and aromatic. There is a good plant here which has stood some twelve years, so that it has proved hardy. It is quite distinct.

Cut Yew.—Those who like to see the fantastic peculiarities of animals and birds on their Yews should grow the common Yew or *Taxus baccata adpressa*, and get shapes made of wire or Bamboo for the training of the branches to the forms required. After having secured the shapes, simply tie in the growths. As soon as the desired end is obtained, keep in character with a pair of shears.

Most of the species and varieties mentioned are grown in these gardens.

W. A. COOK.

Leonardslee Gardens, Horsham.

A NEW HONEYSUCKLE.

In 1910, when *Lonicera pileata* was given an award of merit by the Royal Horticultural Society, it was referred to as well worth growing for the sake of its neat bushy habit alone. By comparison with *Lonicera nitida*—of which there were some charming little examples in Messrs. Veitch's nursery at Coombe Wood last autumn, and which have since, I believe, been distributed—*Lonicera pileata* is, as an ornamental shrub, left far behind. *Lonicera nitida* is of a dense, compact habit of growth. It is said to reach a height of 3 feet to 6 feet, but I was much impressed with some perfect little examples about 2 feet high. In this state they would form ideal pot plants for decorative purposes where the conditions are too cold and draughty for tender subjects. The leaves, which are very thickly disposed on the shoots, are small, ovate in shape, and of a bright shining green colour. The flowers are said to be creamy white and fragrant, but I have not met with them. At all events, its merits as a foliage plant alone are such that the question of flowers may be passed over. H. P.

RHODODENDRON ISABELLA MANGLES.

This is a variety of exquisite form and colour that will unquestionably be widely grown when better known. It was raised by the late Mr. H. J. Mangles of Haslemere, and it is one of the greatest triumphs of that veteran raiser. The parentage of this variety is not known with any degree of certainty, but it is probably a cross from some garden form of *R. arboreum* and *R. Aucklandii*. True to the characteristics of *Aucklandii* hybrids, it is early to flower, and on this account is liable to injury if grown outdoors, except in congenial places, as in the South and West of England. The trusses of flowers are remarkable for their size. In colour it is not unlike the renowned Pink Pearl. It is a soft pink, without the least suspicion of purple, even as the flowers age.

GARDENING FOR BEGINNERS.

AURICULAS: HOW TO REPOT AND TAKE OFFSETS.

MANY years have passed since Auriculas first attracted attention, and during this long period numerous growers have done all they possibly could to improve their favourite flower. Among them are Douglas, Ben Simonite (a Sheffield working cutler), the Rev. F. D. Horner, the Lancashire weavers and a host of others. The Auricula is an amateur's plant in the truest sense of the word. Once the amateur makes a start, he will not be content with just growing them, but will begin to raise seedlings, although one must be prepared to flower a large percentage of plants which will be inferior to those already in commerce. This part of the subject was discussed a few weeks ago in *THE GARDEN*, and we are now chiefly concerned with the repotting and increasing the stock by means of offsets.

The Potting Compost.—In the old days the frames were specially constructed, and there was always a certain amount of mystery about the compost; but now we know that Auriculas can be successfully cultivated if given ordinary attention and never coddled. A suitable rooting medium consists of good decayed fibrous loam three parts, and one part leaf-mould, with just a sprinkling of rotten cow-manure. Auriculas must never be overpotted. A receptacle just large enough to comfortably take the roots should be

the rule, and the pot filled one-fourth of its depth with drainage.

How to Repot.—During the month of April the majority will be in flower, and as they pass out of bloom repotting may commence. The first illustration shows a specimen ready for treatment and a number of offsets which can be taken off and placed in a pot, as depicted in Fig. 2. After taking away the offsets, a portion of the old soil should also be removed, and where any clusters of the woolly aphid exist, it will be necessary to sprinkle

the affected parts with Tobacco powder. The bottom of the tap-root ought to be examined, and where it has begun to go rotten, a little powdered charcoal can be applied after the decayed portion is cut away. When the repotting is finished, arrange the plants in a cool frame, preferably one with a north aspect, and only give enough water to keep the foliage from dropping; but as the roots take possession of the soil, more water can be given, although at no time will the Auricula tolerate a wet, stagnant compost about the base.

General Treatment.—Throughout the summer months admit plenty of air; indeed, the lights can be pulled off at night whenever the weather is fine, while, should green fly make its appearance, the structure must be vaporised at once. This not only destroys the green fly, but will kill the woolly aphid that may be around the plant. As winter approaches, the supply of water ought to be less, and when giving water none should be allowed to lodge in the crown of the plant, while, of course, drip from the frame must also be guarded against. All dead leaves should be carefully removed, ample fresh air admitted, and the plants kept just on the dry side; then very little harm will accrue during the winter months.

Taking Offsets.—In the second illustration are shown some offsets. These are taken off in February and August, also when the plants are repotted. Some varieties produce offsets freely, particularly the alpine section; but the show forms are, as a rule, shy in this respect, and with choice Auriculas an offset can be removed at any time. It is advisable to take off an offset



2.—OFFSETS REMOVED AND POTTED UP.

with a little root attached, wherever possible, when it can be placed singly in a $2\frac{1}{2}$ -inch pot; but it is not by any means essential for the offsets to be rooted prior to removal. When they are cut off in this condition, several may be arranged around the edge of a pot, as seen in Fig. 2, and if put in a hand-light and kept shaded from strong sunlight, they will soon form roots, when they can be potted separately and treated as older specimens. Some would have us believe that there are many secrets in Auricula culture; but this is entirely erroneous, and if a few simple details are observed, such as careful watering—the plants ought never to be dust dry or excessively wet—freedom from insect foes and a sweet, wholesome rooting medium, success will be assured, and the grower will be rewarded with a set of plants which are second to no florists' flower in beauty and refinement. S.

JERUSALEM ARTICHOKE.

Planting Tubers.—It is very rare indeed that this useful vegetable is cultivated as well as it deserves to be. If we experience a bad winter for green crops and are able to put by a good stock of Artichoke tubers, the shortage of vegetables is not so keenly felt in the household. The Jerusalem Artichoke will grow in almost any kind of soil and in nearly every part of a garden. On this account it is usually allotted an odd corner where the soil is poor and but indifferently tilled, with the result that the crop is a poor one, the largest tubers at the end of the year being no bigger than those used for seed purposes. Plant at once in friable soil. The position ought to be an open one, not under the branches of trees nor too near high walls. The soil must be trenched to a depth of 30 inches and some well-rotted manure thoroughly mixed with it. Then the tubers should be planted 1 foot to 18 inches apart in rows 3 feet asunder and buried 6 inches deep. So treated, satisfactory results will be obtained. B.



1.—PLANT READY FOR REPOTTING, SHOWING OFFSETS WHICH MAY BE TAKEN OFF NOW.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Phloxes.—The varieties of the *P. decussata* type that have remained in the open ground through the winter will produce finer trusses of flower if the weakest shoots are removed, allowing five or six of the best to mature.

Cuttings.—Where these have been taken off in the early part of the year and rooted on mild hot-beds, the young plants will now be ready for transferring to the open border. Plant in threes triangularly.

Michaelmas Daisies.—Avoid overcrowding of the growths. Five or six staked singly will suffice. When treated thus, the habit of the plant is seen to perfection. When the growths are about 6 inches high, staking is best carried out.

Staking.—This with many subjects, in my opinion, is left too late, and support is given after the plant has suffered from the effects of the wind. Do not delay longer than is absolutely necessary, and place suitable supports of sufficient thickness. Always endeavour to carry out the work neatly but efficiently, bearing in mind also the approximate height the plant will attain.

Pampas Grass (*Cortaderia argentea*).—The established clumps of this elegant subject for lawns, borders and the like will now need trimming previous to recommencing growth. Cut away the old inflorescences and trim the foliage with a pair of shears. Replanting is best carried out now. Make the soil as rich and holding as possible. This plant succeeds well near to the water's edge, and also bears division well.

Gunneras.—If the winter protection has been removed, temporary shelter must be afforded the plants in the event of late frosts, otherwise the young leaves will be injured.

Water-side Plants.—Such plants as Phragmites, Typhas, Carex, and Miscanthus, should have the old foliage cut down without delay.

Mina lobata.—This is a pretty and interesting half-hardy annual climber, and easily raised from seed, which, if sown at once singly in small pots, will produce good plants for placing out of doors in June.

Ecceprocarpus scaber.—For quickly covering a sheltered position this is an invaluable climber, and when well established often proves hardy. Seed may be sown at once as advised for the foregoing subject.

Plants Under Glass.

Primulas.—A sowing may now be made for providing a display in the late autumn. Sow the seed thinly on fine soil in well-drained pots or pans, and cover with a sheet of glass and then with a sheet of paper. Place in a warm house until germinated. The numerous varieties now to be had of the *P. sinensis* type and variety *stellata* in such exquisite colours has done much to popularise them for greenhouse decoration.

Auriculas.—The plants as the flower-spikes extend may be removed from the frames to the greenhouse. Neatly support the truss with a thin piece of stick or other material.

Palms.—These may be, when rooting freely, occasionally watered with properly-diluted farmyard manure and soot-water, which will tend to darken the leaves. Keep them well syringed at least twice daily, and afford plenty of shade. Take every precaution when sponging to preserve the leaves from injury.

Exacum affine.—Sow the seed at once for producing nice plants to flower in late summer and autumn of this free-flowering pretty blue greenhouse plant. Raise the seed in heat and pot off early into small pots. Keep growing on sturdily.

Gladiolus Colvillei albus (The Bride).—We grow numbers in 5-inch pots, and these are extremely useful now for flowering in the greenhouse. Until introduced keep the plants in a cold frame. Water occasionally with liquid manure-water, and place a few supports to the growth.

Sparmannia africana.—This is a free-growing old greenhouse favourite in many places. If the

pots are filled with roots, water liberally, and occasionally use stimulants.

The Kitchen Garden.

Peas.—If the seed has been sown in boxes as recommended for the earliest sowings and raised in a cold frame, plant out the seedlings as soon as these are large enough. Stick the plants at once and protect from the birds.

Sowing Seed.—Sow seed of good Marrowfat varieties for midseason supplies in the open ground. If mice are a pest, steep the seeds in a thin mixture of red lead and water. Either place guards or protect from the birds by stretching black cotton over the rows.

Turnips.—As soon as practicable, thin out the seedlings and run the Dutch hoe between the rows.

Hoeing.—The value of the use of the Dutch hoe between crops cannot be overestimated at this season of the year, as not only does it check the growth of all weed-life when in a young state, but it also aerates the soil and does much to stimulate growth.

Lettuces.—Make occasional sowings of whichever variety is most esteemed. Continue to plant out any seedlings from boxes or frames. Place black cotton over the young plants.

Salsify.—Make a small sowing at once in a piece of ground such as one would select for Carrots. Sow the seed thinly in shallow drills, and thin out the seedlings when large enough to 1 foot apart.

Hardy Fruit Garden.

Protect whenever possible against late spring frosts. As soon as the protective material is done with, dry it thoroughly and put it away.

Alpine Strawberries.—If seed was sown as advised, the seedlings will be ready for transferring to boxes or a shallow frame. Prick out 2 inches apart.

Early Strawberry-Beds.—If a few early fruits are desired, a temporary framework erected over the beds, with means for drawing over tiffany or placing lights on, will help to forward the fruit.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Fruit-Houses.

Peaches.—The late trees will be advanced enough for the fruit to be thinned, and probably some of the shoots will need tying. Do not be deceived with extra strong growths, but rub them off. They are worse than useless. Syringe regularly twice daily.

Pot Fruit Trees.—These are largely grown in private gardens, and at this period, if the weather be at all genial and bright, the water-pot will be much in use. Over-watering, however, is to be feared. A sharp look-out must be kept for the first appearance of aphid; once it becomes established it is only eradicated by unintermitting attention.

Vineries.—Vines in all stages of growth call for constant attention to the removing of superfluous growths. I allow no leaves to form but the primary one on the laterals, all other growth being rubbed off. This not only saves a lot of labour were the growths permitted to extend several inches before removal, but it benefits the Vines, and insect pests are much easier to keep down should they appear.

The Kitchen Garden.

Celery.—The latest should now be ready to prick out, as advised for the early sowing.

Potatoes.—The points of the earlies which peep above ground should have some dry soil banked over them as a protection against morning frosts, and those in the main quarters surface-hoed to destroy any seedling weeds which appear at this time. There is no fear of cutting the tops of the Potato growths meanwhile.

Lettuces.—Early-raised plants in frames will be growing apace, and as they grow will need much water, which must be carefully run in between the rows of the plants, in order that the lower

leaves of the Lettuces are neither stained nor, what is worse, rotted. Those sown in a frame four or five weeks ago will be ready to transplant in lines in the kitchen garden. They do well on the ridges between the trenches prepared for Celery.

Early Peas.—Dwarf varieties should have some pieces of dead Spruce or other suitable material stuck in along each side of the rows to keep the plants, when they begin to pod, from falling over. If no supporting material is available, draw some earth to the haulm as a substitute. Thoroughly stir the soil between the rows.

Early Carrots.—If these are to be thinned, let it be done at once, so that those left are not disturbed. As a rule it is not essential to thin this crop, provided the seed was not thickly sown and the drills were drawn wide rather than deep. Begin drawing the roots while yet small, and those left will grow into quite usable stuff.

The Plant-Houses.

Seedlings.—It is imperative that seedlings of both stove and greenhouse plants shall be pricked out while yet small.

Camellias.—These submit to the knife without showing dislike in subsequent growth; therefore, now that the bloom is past, cut back any shoots that have grown out of proportion, those that are misplaced or near the centre of the bushes, and dead portions, cutting these into the live wood. Occasional syringing with hot soapy water keeps them clean. Surface the borders with any suitable manure or compost.

Cantua dependens.—Though not much cultivated now, this almost hardy South American shrub is well worth the attention of those with large conservatories to furnish. It is rather susceptible to the attack of red spider, and now that the plant is about to open its waxy flowers it should be powerfully syringed with warm soapy water or a good insecticide to prevent their appearance while in flower.

Perpetual-flowering Carnations.—Autumn-struck plants in 5-inch pots should now be ready for a shift into others two sizes larger, and those of the January batch in 3½-inch or 4-inch pots at a like stage of forwardness also repotted. There should be abundance of bloom on flowering plants, and there is no reason why they should not be utilised to furnish the conservatory and do duty as house plants at this season, of course reserving those intended to be grown on for another year, and which provide the autumnal supply of cuttings. It is hardly necessary to remark that young plants must be grown altogether under glass in the North with abundant ventilation.

The Flower Garden.

Herbaceous Borders.—Before growth becomes too close, these should be surface-dressed with some material which will stimulate growth without developing coarseness. Then hoe the exposed surface and clean away decaying vegetation, if any.

Spiræa Van Houttei affords some of the most precious material for cutting during early spring, the tender green of the foliage being unapproached. To have long, straight wands it is essential to sacrifice the bloom of at least some of the plants, and now is the time to severely cut them back.

Forsythia suspensa.—This also is at the stage to prune where the plant is allowed to flower on the summer-made shoots, and if trained to a wall the old shoots should at the same time be made secure. Plants spur-pruned in autumn only require a rearrangement of the shoots at this time, retaining if that is needed. This is not a usual method of treating this handsome shrub, but it is a perfectly good one.

Violets.—The old plants have now finished flowering, and new plantations should be formed without delay. Ours are all grown at the base of south and west walls, and need to be renewed from rooted runners every second year. Owing to being grown on the same ground, it is essential that a heavy dressing of decayed cow-manure be dug in, and fertilisers applied once the plants are established. Though the foliage was destroyed by the drought last summer, a surface-dressing brought the plants round, and there has been a profusion of fine, long-stalked flowers.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

NURSERY NOTES.

THE RISE OF THE PERPETUAL-FLOWERING CARNATION.

THOSE who have only a superficial knowledge of the extent to which the Perpetual-flowering Carnation is grown in this country would be very greatly astounded could they visit one of the several big establishments that have during recent years sprung into being. We recently had the pleasure of spending a few hours with Mr. A. F. Dutton at his nurseries, which are situated at Iver, Bucks, a charming village lying between Uxbridge and Langley. Not only does Mr. Dutton grow enormous quantities of plants for providing cut blooms for market, but he also propagates, on a most extraordinary scale, all the best-known varieties for providing plants for his rapidly-increasing host of customers.

To give our readers some idea of the demand which exists for plants of these Carnations, we may mention that from November till March inclusive one house is given over entirely to propagation, which is effected by means of cuttings. This house accommodates 50,000 cuttings, and the work is so arranged that a third is emptied each week. This means that the cuttings take three weeks to root sufficiently well for potting off into 2½-inch pots. A simple sum in arithmetic will show that Perpetual-flowering Carnations are rooted here at the rate of 50,000 every three weeks over practically six months of the year! The process of propagation is most fascinating. Deep beds of sand are placed on raised stages, and after the cuttings have had a few of their basal leaves removed, as well as the tips of the long, upper ones, they are inserted about an inch deep in the sand, given a light overhead watering, and then kept fairly close until roots have been formed. Naturally, every care is taken to prevent these youthful plants becoming drawn and weakened.

The ease with which these Carnations can be grown in quite cool greenhouses is, no doubt, responsible for the huge demand for plants that Mr. Dutton has to meet. Nor can they be regarded as expensive to buy. At the time of our visit in mid-March Mr. Dutton had several thousands of splendid plants in 5-inch pots, many of them carrying three or four well-developed flower-buds, and these he was, and is still, offering at a very low price. Plants of this size will continue to flower right through the summer and well into the winter, especially if potted on into 9-inch pots; hence a few dozen would be an excellent investment where long-stemmed and beautifully-coloured Carnations are appreciated. We have never seen a cleaner or healthier lot of plants than those in the nurseries at Iver; and as Mr. Dutton has such huge quantities to select from, there is no necessity for him to send out a single second-rate plant.

During recent years we have from time to time advocated the use of this class of Carnation for bedding purposes. Contrary to general opinion, they are quite hardy, and we know of several instances where plants have been entirely outdoors and unprotected for several years. But for bedding purposes it is no use planting small plants from 3-inch pots. Before such examples reach flowering size, half the summer has gone, and it is the use of such plants which has led to the belief that these Carnations are not suitable for bedding. If plants from 5-inch pots, such

as those we saw vast quantities of at Iver, are used, and are planted out any time from mid-April until mid-May, they will continue to flower until the end of October, or, if the weather is mild, well into November, when they can be carefully lifted, repotted and taken to the greenhouse to continue their display, or, if preferred, left where they are all the winter. If the latter course is adopted, they will need cutting back fairly hard the following spring.

As already stated, Mr. Dutton has practically every known variety in his nurseries, but, naturally, some are grown more than others. Thus, for cut flowers he prefers Beacon as a scarlet, although, of course, many prefer Britannia. Mrs. T. W. Lawson, White Perfection, White Enchantress, Winsor, Mrs. H. Burnett, Rose Pink Enchantress and Harlowarden are all favourites of his. A beautiful white variety that is as yet but little known is Niagara. We were very much impressed with this, and it undoubtedly is one of the coming Carnations. It has a splendid branching habit, flowers freely, and the blossoms are really exquisite. They are large and full, of beautiful texture and dense whiteness, and among many hundreds of blooms we could not find a burst calyx. But the feature above all which appealed to us was its powerful, yet delicious Clove fragrance. If you want a first-class white Carnation that smells as sweet as the Old Clove, get Niagara. Practically every novelty in Carnations can be supplied by Mr. Dutton, who believes in keeping his stock well up to date.

Apart from the perpetual-flowering type, border Carnations are grown on a very extensive scale at Iver. At the time of our visit many thousands of sturdy young plants were standing on ash-beds outdoors, ready for despatching to customers, and we have never seen a more healthy or sturdy lot. We have had occasion to refer to the Old Red Clove, and it may be interesting to record that Mr. Dutton has a particularly good strain of it. Indeed, so heavy is the demand that he finds it difficult at times to propagate sufficient of it to meet the requirements of his customers. Those who visited the National Carnation and Picotee Society's show at Vincent Square last year will remember very vividly the magnificent exhibit of border Carnations that Mr. Dutton staged on that occasion. It consisted of no fewer than eighty distinct varieties, and we doubt whether such an exhibit has ever been staged before. Malmaison Carnations are also grown and propagated on a large scale, and the collection at Iver includes all the best varieties.

By close personal attention to details, Mr. Dutton, who is an exceptionally keen and up-to-date man, has built up a business in Carnations which is among the foremost in this country, and we imagine that even more will be heard of his doings in the future than has been in the past. The coloured cover on this issue represents three varieties of Mr. Dutton's, which he thinks highly of.

The Royal Counties Agricultural Society.

The council of this society, encouraged by the success of the horticultural section at the Weymouth Show last year, have decided to include a flower show in their programme for the show to be held at Guildford on June 11 to 14 next. The management has again been placed in the hands of Mr. C. S. Foidge, secretary of the Southampton Royal Horticultural Society, who will be pleased to supply all particulars.

ANSWERS
TO CORRESPONDENTS.

TREES AND SHRUBS.

CYDONIA NOT FLOWERING (*C. G.*).—It is possible that the transplanting of *Cydonia japonica* last year may be the cause of the lack of flowers this season. There is nothing that you can do to hasten the flowering, and it is possible that if you leave your plant alone this year, a crop of flowers will appear next spring.

LARGE LIME TREE SHOWING SIGNS OF DECAY (*Arboriculture*).—The best thing to do with your Lime tree, which is deteriorating in health, is to go over the tree carefully and remove all the dead wood and rubbishy sucker growths. Then remove the turf to a distance of 6 feet outside the radius of the branches, fork the surface soil lightly over, and apply a dressing 6 inches deep of farm-yard manure and soil mixed. Leave for twelve months, and then sow with grass seed. The next best plan is to leave the turf on and give a thorough good soaking with cow-manure water two or three times during summer. It is necessary to remember that the feeding roots are a considerable distance from the trunk. The mere fact of clearing the dead wood away will have a beneficial effect. All wounds should be dressed with tar as soon as made.

KITCHEN GARDEN.

ASPARAGUS-BED AND SALT (*E. K. M.*).—Salt has the property of lowering the temperature of soils, and a clay soils are already too cold for the welfare of this plant, it would undoubtedly be unwise to apply it as a top-dressing at a time when the young grass is about to start into growth. The following will be found an excellent substitute, the quantity given being sufficient for one rod or perch of ground when mixed together: Kainit, 5lb.; nitrate of soda, 3lb.; and superphosphate, 2lb.

SEAKALE (*F. G. G.*).—The ground should be trenched 2 feet deep and liberally manured with rich, well-decayed farmyard manure, burying it 12 inches deep, as the roots of the plant delve deeply into the soil. As long as the ground is well and deeply cultivated and manured, the Seakale will grow well in any good ordinary garden soil; but it prefers a well-drained, deep loam of a moderately heavy texture, where it will develop splendid heavy root-stems to one year, yielding a splendid crop the second year. It is propagated by making cuttings of the strongest fan-like roots which are found at the base of the root-stems. These should be cut into pieces 5 inches long, the top part of the cutting being cut straight across and the bottom part wedge shape, to distinguish the top from the bottom, which is difficult otherwise. The best time to take the cuttings is the late autumn, when the roots are taken up for forcing. They should be tied up in bundles of eight, and then buried in the soil to within 1 inch of their top, allowing them to remain in this position until planting-time, late in March. It is not too late to take the cuttings now, and they must be served in the same way and allowed to remain in the bundle form until small buds are formed at the tops of the cuttings, which will be in three weeks or a month, when they should be planted out in rows. About the middle of March is a good time to plant, or earlier if the small buds on the tops of the cuttings are well developed before.

MISCELLANEOUS.

QUASSIA EXTRACT (*E. W.*).—Soak a pound of quassia chips in cold water for five or six hours; then boil in at least a gallon of water for eight hours. After this add sufficient hot water to make the amount up to ten gallons. Of course, a proportionate lesser amount can be prepared. At the same time, quassia extract, all ready for use, or, at least, it only needs dilution, may be obtained from all horticultural sundriesmen. Many prefer this to preparing the extract at home.

INARCHING GRAPE VINE ON VITIS COIGNETIÆ (*J. G. K.*).—A young shoot of this summer's growth of a Black Hamburg Vine could, no doubt, be inarched on this ornamental Vine in the way you suggest; but with what result we cannot say, as we have no knowledge of the experiment having been carried out before. The young shoots united should be of similar size and age as far as possible, and, of course, the Vine in the pot must be well looked after as regards watering. The pot would be better plunged in the soil.

NAMES OF PLANTS.—*B. T.*—1, *Cypripedium spicerianum*; 2, *Cymbidium lowianum*.—*H. F. S. Kenley*.—1, *Euonymus japonicus variegatus*; 2, *Mercurialis perennis*; 3, *Prunus Avium*.—*H. K.*—*Rubus spectabilis*.—*Heather*.—1, *Juniperus chinensis*; 2, *Cestrum elegans*.—*J. P., Royston*.—1, *Euphorbia splendens*; 2, *Strobilanthes dyeriana*.—*Amateur*.—*Iris pumila*.—*A. J., Sheffield*.—*Lotus*: *Bertholletii*.—*H. W. C., Hants*.—1, *Lasia boothiana*; 2, *Trifolium crocatum*.—*E. T., Nantes*.—*Narcissus intermedius*.—*Hex.*—1, *Spiraea arguta*; 2, *Rubus spectabilis*; 3, *Anemone fulgens*. The *Anemone* which grows freely in France and in Rome is *A. coronaria*. The curious growth is not unusual with several *Anemone* species.—*L. G. C. T.*—1, *Berberis Fortunei*; 2, *Saxifraga ligulata speciosa*; 3, *Narcissus Jonquilla*; 4, *Kerria japonica flore pleno*; 5, *Salvia Grahamii*; 6, *Lunaria biennis*.—*P. H.*—The names we believe are as follows: 1, *Catherine Mermat*; 2, *Bouquet d'Or*; 3, *Reine M. Henriette*; 4, *Coronilla glauca*; 5, *Nepeta Glechoma variegata*; 6, too small to identify; 7, *Climbing Captain Christy*. For the mildew you should wash the foliage or spray with a fine sprayer, using Jeyes' Horticultural Wash or Abol.

THE GARDEN.

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APRIL 27, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Rose St. Helena.—This beautiful Hybrid Tea was well shown by its raisers, Messrs. B. R. Cant and Sons of Colchester, on Tuesday, April 16, at the Royal Horticultural Society's meeting, and elicited much praise from the visitors. It is a fine bold flower, reminding one of Joseph Hill, but as seen a much larger and more perfect flower. We should say it will be a very useful addition to exhibition and garden Roses. The same firm also had some excellent groups of Elizabeth, their rose pink Druschki, also Lady Reay and Rose du Barri, two lovely decorative bedding Roses.

Double-Flowered Cherries.—The different double-flowered forms of the Japanese Cherry, particularly that variety known as J. H. Veitch, are among the most valuable of our hardy trees and shrubs. The form just alluded to will flower freely in a comparatively small state, on which account it is especially useful for gardens of limited extent. There is a very attractive and well-placed group in the gardens at Hampton Court, which are just now very gay with various spring flowers. In the long border which stretches from the Palace to the confines of the gardens, groups of different flowering subjects, principally bulbs, are planted. In order to break up the uniformity in height, a group of this Cherry has been planted, and it not only serves its purpose well, but it also tends to show the high ornamental qualities of this beautiful shrub. Its value, moreover, is not limited to the outdoor garden, as it is readily forced into bloom.

The Pineapple-Gall.—Various kinds of Spruces are often seriously disfigured by reason of curious cone-like swellings on the young branches, which have some resemblance to a Pineapple in shape, hence the common name. They are the result of irritation brought about by the puncture of the young leaves by a small whitish aphid known to scientists as *Chermes abietis*. This disease, if allowed to obtain a firm footing, effectually destroys the beauty of the trees and eventually ends in their death. Two methods of extermination may be adopted. Where a few galls only are observed, they may be picked off and burnt; but when they appear in large numbers, this is impracticable. The second method is better calculated to have the desired effect in such a case; that is, to spray the trees once every ten days or so from the middle of April until the end of May, varying the time a little, according to an early or late season or locality, with paraffin emulsion. A good wash may be made by dissolving 1½ lb. of soft soap in a gallon of boiling water, then stirring six pints of paraffin in until a creamy liquid is formed. Make up to thirty-six gallons with soft water and stir frequently while in use.

Roses in Scotland in April.—Mr. John Thom, gardener to Mrs. Hutchison, Carlouvie, Linlithgowshire, is a frequent prize-winner with Roses at the best Scottish shows, and at the last Edinburgh spring show he carried off the first prizes for twenty-four and twelve Rose blooms. It may be of interest to readers to know the varieties he staged. For the twenty-four they were Frau Karl Druschki, Mme. Jules Gravereaux, Mme. A. Chatenay, Anna Olivier, La France, Pride of Waltham, Mrs. E. Mawley, Captain Hayward, Killarney, Richmond, Kaiserin Augusta Victoria, Dean Hole, Liberty, Souvenir de President Carnot, Caroline Testout, William Shean and Maman Cochet. The remainder of the Roses were Mme. A. Chatenay and Frau Karl Druschki.

The Double-Flowered Gorse.—The problem of finding a suitable shrub for satisfactorily clothing a dry, stony bank sometimes presents itself to the owner of a garden, and he has a difficulty in obtaining a suitable plant. If the position is a sunny one, his difficulty is much greater. The Gorse, however, is a shrub that can be depended on to thrive; but, unfortunately, the typical common Gorse has the disadvantage of growing somewhat leggy and of presenting a rather dingy appearance. The double-flowered form, however, has neither of these disadvantages, for it grows naturally into a compact bush, flowers with great freedom and does not bear seed. The effect of a bank covered with this plant in full bloom is a glorious sight, and, strange to say, the poorer the ground the greater is the number of flowers. One point to observe in forming a plantation is to place the plants out from pots—not lift them from a border, for they do not establish well if the roots have been seriously disturbed.

The Pasque-flower.—Planted in semi-wild parts of the garden, the Pasque-flower (*Anemone Pulsatilla*) provides a charming feature during April, for the large mauve flowers are borne with great freedom and are very graceful in character. When given a moderately moist position in a little shade, such as is provided by a thin growth of trees, it often thrives remarkably well; while other plants, such as Ferns, Primroses and Violets, which occupy similar situations, planted with the Anemone, aid in the general effect. At the same time, the Pasque-flower is a plant within the reach of everyone, for small plants are inexpensive in the first instance, and if left undisturbed they soon develop into good-sized specimens and continue to give satisfactory results for a number of years. Varieties may be obtained which differ from the type in the colour of the flowers. Alba, with white flowers, is very distinct, but it cannot be said to be prettier than the common form. As noted in **THE GARDEN** for March 30, page 153, a pretty rose-coloured variety was exhibited recently at the Royal Horticultural Hall.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The First Outdoor Roses.—It might perhaps be of interest to some of your readers to know that we gathered our first outdoor Roses to-day (April 19) viz., Mrs. W. J. Grant, which is early even for us.—ALAN BRADBURY, *Branksome Park, Bournemouth West.*

Primula Gillii : A Correction.—The beautiful Himalayan Primrose figured in the last issue of THE GARDEN, page 191, under the above name has been identified by the Kew authorities as *P. Wattii*, the former name, as I intimated in a note on page 190, having been given provisionally. At the outset I had hopes that the plant might prove to be a new species, and that an appropriate name might have been given it. As the case now stands, the corrected name is neither better nor worse than the provisional one, and neither is in the least euphonious. It would appear, too, that the plant exhibited by Messrs. Gill was more or less in the infantile stage, and that presently a greater all-round development will be forthcoming.—E. H. JENKINS.

The African Hemp—I should like to mention, in reply to the article on that delightful plant *Sparmannia africana*, page 193, in last week's issue, that it is not necessary to have bottom-heat for striking cuttings. I have repeatedly struck them, with complete success, in pots in a cold house without heat of any kind.—BURTON.

— A wrinkle with regard to the successful flowering of this pretty shrub, so well illustrated in THE GARDEN for April 20, page 193, is to expose the plants to the full sun out of doors from the end of July onwards. They must not be allowed at any time to suffer from want of water, but full exposure to the sun and air ensures a thorough ripening of the young growth, on which the future display depends. Treated in this way, I have had good flowering examples even in 5-inch and 6-inch pots, while what is of considerable importance in a greenhouse with a minimum temperature of 45°, rising 10° or even more during the day, there was an attractive display of bloom at Christmas.—H.

Beautiful Flower Combinations.—A piece of border in this garden is always much admired in spring and autumn. The only permanent occupant is an undulating band of the Large-leaved Saxifrage, *Megasea cordifolia*. It is so arranged as to leave bays in front for dwarf plants, and space for taller flowers at the back. In spring the bays are filled with double Arabis and double pink Daisies alternately. Behind the Saxifrage and following its lines where it comes forward are Tulips *Pride of Haarlem* and *Clara Butt*. At the back are pots of *Prunus triloba* and *P. japonica*, which are afterwards lifted and stood on ashes in the kitchen garden. The Saxifrage blooms at the same time, and harmonises well with the spring flowers. When these are lifted, the border is replanted as follows: The bays are formed of alternate scarlet and white Begonias. Behind the Saxifrage are groups of *Lobelia fulgens* *Queen Victoria* and *Cineraria maritima*, and at the back is a hedge of white and scarlet Dahlias with a few plants of the tall crimson-leaved *Mountain Orach*. This sows itself every year and only requires thinning out. The effect of the scarlet and grey foliage combined with the shining green of the Saxifrage is very good.—F. BLOIS, *Cockfield Hall, Yoxford, Suffolk.*

Viburnum Davidii.—Within the last decade or so a great number of *Viburnums* have been introduced from China, some of which have already proved to be good garden plants. Of the evergreen species the best is the vigorous-growing *V. rhytidophyllum*, which is totally distinct from any other *Viburnum*. The species at the head of this note is widely removed therefrom, being of a comparatively humble stature. It was given an award of merit by the Royal Horticultural Society on April 2. During a recent visit to Messrs. Veitch's nursery at Coombe Wood I was particularly struck with this pretty little evergreen, for it was not then in flower. It forms a sturdy, spreading bush, with dark green, corrugated leaves disposed closely on the branches. When shown the plant was studded with clusters of small white flowers. It is, however, I should think, destined to make headway more as an ornamental evergreen than as a flowering shrub.—H. P.

Trial of Violas at Wisley.—In a leading note on the first page of THE GARDEN, issue April 13, there is a timely reference to a trial of Violas at Wisley during the present year. I only wish, here to urge amateur gardeners to cultivate these plants more extensively than they do at the present time. Many years ago, long before there were so many lovely varieties on the market, I was much impressed with the usefulness of the plants in a Scottish garden. One morning, soon after the usual kinds of bedding-out subjects had been planted, the head-gardener at a large establishment found all except the Violas destroyed by a late frost of great severity. Having a good reserve of Violas, they were utilised to such advantage for the summer display in the flower garden that many beds were afterwards always filled with them. In the sandy, hot soil of Southport I have seen Violas thriving through good treatment, and forming some of the most successful beds in a number of gardens there. In the Southern Counties, when properly cared for, the plants are equally satisfactory.—SHAMROCK.

Apple Trees in Grassland.—"A. D.," in his note on Apple trees in grassland, page 178, has suggested that I chose the best specimen and the worst for illustration (page 155, March 30). I can assure him that it is far from it. The thick-headed *Annie Elizabeth*, as he calls it, illustration No. 1, is not the best from Plot 1, which gave us a splendid crop of good-sized Apples last year and bids fair to do the same this year. Illustration No. 2 is not the worst chosen from Plot 2. The worst specimens are not worth the name of Apple trees.—W. D. POPE.

— In reference to this subject, which has lately been interestingly dealt with in the pages of THE GARDEN, I would like to say that very much depends on the quality of the soil, its treatment after the trees are planted, and the treatment also of the trees themselves. I have seen many hundreds of Apple trees growing in grassland, and some of them were much worse specimens than the No. 2 illustrated in THE GARDEN, page 155, issue March 30. Others have been quite as gross in growth as the No. 1 illustrated. If the soil is poor and shallow, and the trees are simply "stuck in" and then left to grow as they may, good results will not follow. They must be given a good start, be judiciously fed and pruned afterwards, and then, in many instances, good average crops will be secured. I would not elect to plant fruit trees in grassland in preference to a deeply-tilled, open quarter,

but there are cases where it is very desirable to do so—AVON.

Epiphyllum Gaertneri.—*Epiphyllum truncatum* and its numerous varieties have been long grown as winter-flowering plants. Grafted usually on to the *Pereskia*, their curiously oblique, bright-coloured blossoms form, during the dull season, a very attractive feature. From this section *E. Gaertneri* differs in flowering during the spring months, also in the regular shape and uncommon colour of the blossoms, they being of a distinct cinnabar red tint. This *Epiphyllum* was introduced from Brazil in 1858, but it is commonly regarded as of hybrid origin, the suggested parents being an *Epiphyllum* and a *Cereus*. There is another, very much in the same way, known as *E. makayanum*. From an ornamental standpoint they are about on a par with each other. This *Epiphyllum* may be as readily grafted on to the *Pereskia* as its better-known relative, and it forms a pretty decorative subject at this season of the year. It is of easy culture, succeeding as it does in a mixture of loam, brick rubble, leaf-mould and sand. The temperature of a warm greenhouse is necessary for its successful culture.—A. P.

An Interesting Cool Greenhouse Plant.—*Lopezia miniata* is by no means of recent introduction, yet it is only within the last decade or so that it has come prominently forward. Even now it cannot by any means be regarded as a common plant. It is a native of Mexico, and requires the temperature of a warm greenhouse. Fire-heat must, however, be dispensed with during the summer, otherwise the foliage is liable to be attacked by red spider. This *Lopezia* forms a freely-branched little shrub, clothed with ovate leaves plentifully furnished with hairs. The flowers, which are borne on the upper parts of the shoots from the axils of the leaves, are rosy red in colour and of a very peculiar shape. When fully expanded they are not more than half an inch across, but are borne in great profusion. A singular feature of the flowers consists of two stalked petals, which stand out on either side in a peculiar wing-like fashion. It belongs to the same Order as the *Fuchsia*, but the shape of the blossoms does not suggest much affinity thereto. This *Lopezia* may be struck from cuttings and grown as readily as its relative just named.—H. F.

Bedding Tulips.—So far as my experience goes in this locality, the time of bedding Tulips seems to have been exceptionally favourable, as I have rarely seen the flowers remain fresh, unsoiled and uninjured, so long in any previous season. We have had for the bloom a remarkably brilliant time. There have been no rain-storms or severe frosts; indeed, though frosts did touch the flowers, they seem to have recovered effectively. In public gardens neither Hyacinths nor Daffodils can for one moment obtain the wide admiration given to the rich-coloured and varied Tulips, with their beautiful cup-shaped forms, such as always command the eye and delight the taste. I noticed recently some complaints that Tulips have this season flowered on short stems. Might not that have been caused by the all too premature ripening of the bulbs last summer, which necessarily restricted growth force? But in one garden I saw a mass of fine, full flowers on strong stems of *Keizerskroon*, and yet, not far off, others on short stems with smaller flowers. But the first-named were the largest-sized bulbs; the others were cheaper. That may explain why in other cases flowers have come so dwarf.—A. D., *Kingston-on-Thames.*

A Little-Known Hard-Wooded Greenhouse Plant.—Such of us as are approaching the sere and yellow stage can well remember the time when *Aphelexis humilis* was met with in gardens much more frequently than it is now. In those days specimen hard-wooded plants were extensively grown, and this species, with some other forms, were sure to be represented. All the members of this genus were looked upon to furnish a good test of the cultivator's skill, for their cultural requirements are somewhat exacting. The species under notice (and they are all much alike) is of a dwarf, shrubby character, the shoots being furnished with narrow leaves and clothed with a whitish tomentum. The flower-heads which terminate the shoots are of a rich satiny rose colour and very freely borne. These flowers are of an everlasting character, and, carefully dried, will retain their colour for years. Botanists now merge this genus into that of *Helichrysum*. Though the days of large specimen plants seem gone or nearly so, this *Aphelexis* may be grown as neat little bushes in 5-inch pots, under which conditions it is of considerable value for greenhouse decoration, and remains fresh and bright for a considerable time. A peaty soil, firm potting, good drainage and careful watering are essential to its well-doing. —H. P.

A Beautiful Ramondia. — The most beautiful of the *Ramondias* is *R. serbica* Nathaliae, freer in flower than the well-known *pyrenaica*, and altogether more refined. Its glossy leaves are webbed with a fine brown tomentum, which is most marked on the young leaves. The flowers are clear lavender blue, and when seen in the sun look as if they are composed of wax. The bright orange anthers make the flowers most attractive. The plant in the illustration is surrounded by limestone, which is said to be harmful to its growth; but this plant has been in this pocket for five years, and looks like becoming a veteran. It was planted in leaf-soil and limestone river sand. I think the most important item in the successful culture of this plant is the question of shade. Morning and evening sun it does not object to, but the burning midday glare dries up the leaves, and they become yellow and die away till the plant becomes smaller and smaller, and, finally, goes out altogether. The white variety requires almost total shade for successful growth.—W. H. PAINE, *Kildare*.

FORTHCOMING EVENTS.

April 29.—National Auricula Society's (Northern Section) Show at the Coal Exchange, Market Place, Manchester.

April 30.—Royal Horticultural Society's Exhibition and National Auricula and Primula Show at Vincent Square. Lecture at 3 p.m. by Dr. Redcliffe Salaman on "Potatoes."

May 1.—National Auricula and Primula Society's (Midland Section) Show at Birmingham Botanic Gardens (two days).

May 2.—Manchester and North of England Orchid Society Meeting. Linnean Society Meeting.

May 4.—Société Française d'Horticulture de Londres Meeting. North of England Horticultural Society's Conference at Newcastle on Horticulture in Secondary Schools and Farm Institutes.

THE ROSE GARDEN.

GROWING ROSES ON BENCHES UNDER GLASS.

THE production of high-grade Roses under glass is becoming quite an art, and each year we may see advances upon old methods. One of the most useful and labour-saving plans is to grow Roses upon benches after the American style.

A writer in an American paper, after visiting many leading commercial growers, came upon one where Roses were grown upon benches of quite novel construction, and it was claimed for this method that it was almost impossible to over-water Roses in strong growth, as they possessed such perfect drainage. All growers of forced Roses know only too well the watering difficulty, and many a crop has been ruined by over or under watering. The firm where these special benches are constructed is known as the Budlong Rose Company, a firm that has been fortunate to secure some grand sports of Killarney. One named Double White Killarney promises to be a real



A PRETTY VARIETY OF THE SERBIAN RAMONDIA (*R. SERBICA* NATHALIAE.)

good thing, a much more double flower than the White Killarney as we know it.

The benches are made with 2-inch by 12-inch boards for the sides, nailed to stakes or wooden supports 20 inches high, leaving an 8-inch space under the side. This space is filled with stone up to the bottom edge of the side boards, flat stone being edged up along the sides, inside of the side boards, and the centre filled with rough stone. A thin coating of ashes is placed on these stones, and then 8 inches of soil. The writer says that he saw at this establishment the finest Roses of all, and he had already made many calls at large and well-known houses.

This company had grafted some five to six thousand of Sunburst, so they evidently have a high opinion of its merits. The colour is something of the shade of Mrs. Aaron Ward, although not quite so changeable and liable to fade, but with a much larger flower and heavier foliage. They consider it the best Rose of its class, and also grow Lady Hillingdon largely. The colour of this latter is grand, but I should say Sunburst will be better

in stem and foliage, and possibly in colour. Amateur growers over here will be well advised to build a special house for Roses, growing them upon benches as described. Do not be afraid to allow plenty of head-room. It used to be urged that too much air space was bad for Roses; but if a visit were to be paid to some of our large commercial houses in this country, it would be found that the houses are quite lofty, even where the Roses are planted in the soil; and it is nothing wonderful to meet with plants of *Niphetos*, *Bridesmaid* and similar sorts 5 feet to 6 feet in height and as much through. This would not be attempted upon benches, as the Roses are cut so hard and with such long stems that they are soon exhausted, and it pays best to renew every two or three years with young stock raised either from cuttings or by grafting.

The American growers are great believers in the Manetti stock for grafting purposes, and they have proved it to be more amenable to early forcing than the Briar. I do not advocate this stock in a general way, but would advise anyone desirous of forcing Roses in midwinter to obtain their plants upon it rather than upon the Briar. The old *Niphetos* will make marvellous plants upon this stock; so also will *The Bride*, *Bridesmaid* and *Catherine Mermet*. Richmond, too, will do remarkably well upon Manetti. Even outdoors as maiden plants it far surpasses those on the Briar, but not for permanency. I fear many failures with this *Rose* and *Liberty* in outdoor beds could be traced to the plants being on Manetti stock. It is not too soon to be thinking about preparing some benches or borders under glass for next winter's forcing, and orders should be placed with the growers for young plants to be delivered in June, as this is the best month to plant out under glass.

A good fibrous loam, well enriched with one year old cow-manure or old hot-bed manure and a liberal sprinkling of bone-meal or quarter-inch bones, is one of the best composts for Roses. If the house has been erected upon a good Rose soil and it is intended to plant in the soil, trenching should be carried out at once, and I would advise some basic slag at the rate of 6oz. to 8oz. per square yard being worked into the lower spit and bone-meal into the upper.

Plant about three feet apart each way, and later on cut out some plants if they grow too densely, as they are sure to do when all conditions are favourable. I am surprised, on going about, that there are not more houses utilised for the forcing of Roses. One may meet with a dozen or two pot plants, perhaps, and these are very often wretched specimens.

When will our English gardeners awake to the possibilities of Rose-forcing, and bestow as much care on this flower as they do now on the *Carnation* and *Chrysanthemum*? I am looking forward to the time when our National Rose Society will have its spring exhibition; then, perhaps, a stimulus will be given to this branch of Rose culture. I imagine there are numbers of employers who would be only too glad to have in their establishments a house or houses of Roses of the type so grandly shown by some firms at the spring shows of the Royal Horticultural Society. P.

THE KITCHEN GARDEN.

DWARF FRENCH OR KIDNEY BEANS.

THE French Beans are most useful for summer crops, and though very tender and one of the first vegetables to feel the effects of frost, from June to September they are much valued. The tender nature of the plant prevents sowing in the open ground till the earth is sufficiently warmed by the sun to assist germination, and in heavy soils some means should be taken to drain or lighten it, in order to secure an early crop. Of late years the climbing type has found much favour with growers, as this variety yields pods for a longer period, though not quite so early. At the same time, the dwarf section will still find many admirers, owing to their rapid growth, the limited space required for the plants, their easy culture, and good return for the space occupied.

Choice of Varieties.—There is abundant choice of varieties in the dwarf section. Such sorts as Early Wonder, Early Favourite, Ne Plus Ultra, Syon House, Sutton's Forcing (a very dwarf form), the older Mohawk, Progress and Wythes' Early Gem are all excellent for first crops; and for succession or later supplies, Perfection, Masterpiece, Magnum Bonum, Long Sword, Canadian Wonder and Monster Negro Longpod are also good. I have referred to the climbing section for summer supplies. The plants range from 4 feet to 8 feet in height and give shapely pods in abundance. If gathered in a young state, they are of excellent quality. The earliest of this section to be introduced were Veitch's Climbing French and Sutton's Tender and True. These varieties are much grown under glass for market purposes. An earlier podder of this section is Sutton's Earliest of All; this is a delicious vegetable when the pods are gathered young and cooked whole. Princess of Wales is noted for its long-bearing properties, and Epicure bears round, thick, fleshy pods; it is a good summer variety. Other excellent sorts are Carter's July (this is a Stringless Bean) and Successor. Both of these are very good for use from June to October. The Stringless Beans, gathered young, are superior in quality when cooked whole to those sliced.

Cultivation.—The culture of the dwarf section, to get the best results, should be of a generous nature, giving ample food in the shape of well-decayed manure, and the land should be deeply dug some time in advance of cropping. When sowing, avoid crowding the seeds. It is far better to place the seeds in the drills 2 inches to 3 inches apart and obtain a much stronger plant. A warm south border should be selected for the earliest lot sown in the open, and the land, as advised, be well enriched with manure. Sow in

drills, and in heavy soil cover the seeds with lighter material, such as burnt refuse, wood-ashes, old soil from a Marrow-bed, or spent manure.

The Time to Sow.—In the South the middle of April is sufficiently early to make the first sowing. I have even then in cold weather covered the seeds with litter at night, as the plant just as it appears through the soil is very tender in exposed gardens or heavy land. The end of April would be a safer date, and there will be little loss of time, as the plants with more solar warmth will make rapid progress. For succession seeds should be sown every three weeks till August. Sow in drills 2 feet to 3 feet apart, according to the variety, if dwarf or otherwise.



THE NEPAUL ROCKFOIL (*SAXIFRAGA LIGULATA*) IN THE HIMALAYAN HOUSE AT KEW.

Sowing in Frames.—This note would be incomplete without reference to the great advantage of raising this vegetable under glass. Few, if any, vegetables lift or transplant better. By the term "glass" I do not mean forcing, but merely glass protection to raise the plants. Those who have a cold frame can raise this crop splendidly by sowing in shallow boxes in good loam mixed with short manure. Sow very thinly, so that the seeds do not touch each other, and keep the frame close till the seedlings are through the soil. Grow near the glass for a week or so, and then transplant with a ball of earth and roots intact.

G. WYTHES.

THE FLOWER GARDEN.

THE NEPAUL ROCKFOIL.

(*SAXIFRAGA LIGULATA*.)

AMONG the large number of Saxifrages cultivated in gardens, this species certainly ranks as one of the best. Although considered hardy, it is desirable to give it the protection of a cool greenhouse for the full development of its blossoms, for unless planted in a sheltered situation it is liable to injury from frosts during its early season of flowering in February and March. The large white flowers are tinged with rose towards the margins of the petals, while the anthers are of a reddish purple colour. The bright green leaves are broadly ovate and glabrous on both surfaces. To grow this Saxifrage successfully it should be planted in an open soil in the crevices of large rocks. The plant also delights in a moist and somewhat shady situation. *S. ligulata* inhabits the mountains of Northern India, and was introduced to this country by Dr. Wallich in 1821. W. T.

SWEET PEA NOTES.

Planting.—It is now time that this task was completed. The autumn-raised plants which survived the exceptionally sharp though short spell of frost were generally on the sappy side, as they have not ceased to make visible progress through the winter, and they wanted careful handling. Those put out at the middle of the month are settling down satisfactorily, and should proceed steadily, provided that we do not get too many east winds to stop or cripple them. Just now these are much more to be feared than late frosts, and if protection afforded by stakes has not been put in position, let no further time elapse. Water will be required to maintain the soil moist, but it should not be given until it is absolutely necessary, as it reduces the temperature of the soil and thus puts a slight check on the plants. Looseness of the surface will keep in the moisture.

Supporting the Plants.—The fact that the young plants will not properly support themselves in the earlier stages must never be overlooked. There are amateurs who do not care to go to the little trouble involved in tying up to the shoots, and who to avoid it endeavour to twist them round the sticks; but the practice must be deprecated, as it retards instead of encourages development. When things are precisely as they ought to be, there should be a place for each growth, and the efforts of the cultivator must be directed towards seeing that each goes into its allotted position. This forces one to have recourse to tying, in which care is imperative that the support is efficient, but that it in no degree arrests advance.



A BED OF HYACINTH GRAND MAITRE AT HAMPTON COURT.

The ligature must, therefore, be comparatively loose, so that the shoot within it can swell freely.

Sticks and Wires.—When the young plants are securely attached to the twiggy sticks which are invariably utilised for the early stages, the permanent stakes must be inserted, and they will vary in nature and in height according to local conveniences. Hazel is indisputably the most generally satisfactory, and no efforts should be spared to secure it. In some places it runs on the expensive side, but the enthusiast will readily provide what is necessary when he appreciates how advantageous it is for the plants. Failing Hazel, then whatever brashy wood that can be got must be used.

Wire in some form or another is gaining popularity. Excellent supports made of galvanised wire are now readily procurable from advertisers in *THE GARDEN*. They are convenient, splendidly made, and will last an unlimited time if they are stored through the winter in a suitable shed. At the outset they run into money, but the very fact that they are, to all intents and purposes, imperishable at once proves them to be economical in the long run. Ordinary galvanised wire-netting also answers the purpose well, but there is no gainsaying the fact that it is more difficult to store in the winter than the trainers previously mentioned. Whenever wire is employed, I am in favour of training on sticks to start with, say, until the plants exceed a foot in height. They can then be attached loosely yet securely to the wire, and will make splendid progress.

The Cheapest Support of all is constructed of wooden uprights at the end of the lines, with stout, soft string stretched tightly between. This is not all that can be desired, but it is infinitely better than nothing at all. The post should be of 2-inch wood, and the bottom must be tarred, creosoted, or soaked in paraffin to preserve it; then across it there should be three pieces varying in length, the longest being in the middle or at the top. If the rows are very long, there will, of course, have to be intermediate supports; but for an ordinary row of 10 feet or so, one at each end will do.

The grower for exhibition will adopt Mr. Stevenson's system, which is to confine each plant to one stem. I do not hesitate to say that the method of growing and training Sweet Peas to one stem has not my sympathy; but I am forced to confess that those who would have the most

magnificent blooms have to rely upon it or some slight variation from it. HORACE J. WRIGHT.

SPRING FLOWERS AT HAMPTON COURT.

IN several previous issues we have referred to beautiful effects produced by spring flowers in the gardens at Hampton Court, to which the public have free access. On this page we give two illustrations of flowers there, one showing a charming combination of Hyacinths and Tulips in the long border that is always beautiful and interesting, and the other a bed of that exquisite blue Hyacinth Grand Maitre. The whole of the plants have looked remarkably well this spring, and, as usual, the colour combinations have been good, reflecting the greatest credit on the superintendent and his staff.

CANDYTUFT FOR DRY BORDERS.

THE Hyacinth-flowered Candytuft is splendid for growing in a naturally dry soil. The plants branch out and produce about half-a-dozen fine heads of blossom. The average height is 1 foot and, as the plants come to the flowering stage early, they are specially suited for growing in raised borders or dry corners where few other kinds

of annuals will thrive well. Sow the seeds thinly in boxes or in pots in a cool frame, using a light, sandy mixture, and transplant the resultant seedlings while they are quite small, in order to ensure stocky growth and a good branching habit. If the soil is very poor, mix some well-rotted manure with it, breaking up the manure into fine pieces and not burying it in big lumps. The manure should be quite 2 inches below the surface. The following are beautiful varieties to grow: Lilac, Purple, White, Dunnett's Crimson, Carmine (this is a bright clear rose in colour), Rose Cardinal (rosy scarlet) and Carter's Spiral (pure white). B.

CAMPANULAS.

EVERY year a batch of plants should be raised from seeds to take the place of old specimens. These plants and the Canterbury Bells (*Campanula Medium*) are excellent border subjects, and provide a wealth of blossom when the seedlings are well grown. Long tap-roots form in the first instance, and it is a wise plan on the part of the cultivator to transplant the seedlings at an early stage, and again, later in the season, before there is any attempt made to put the plants in their flowering quarters. The frequent transplanting induces the formation of numerous small roots, and the number is vastly increased by twisting up the long tap-root at the time instead of planting it straight down in the soil. In many gardens there are shady borders, and few kinds of plants are more suitable for growing in them than these. The lovely pink-flowered Canterbury Bell does splendidly in a shady border, and the Campanulas, even *C. pyramidalis*, both white and blue varieties, last longer in bloom and are richer and purer in colour when so grown.

Campanulas are very free-rooting subjects, and even in the seedling stage they require a deeply-dug, well-loosened soil to grow in. The soil in shaded borders need not be made very rich with manure, but borders exposed to the sun's rays must be well enriched with rotted manure. Slugs are very fond of the young bursting crowns of the plants, and the cultivator must be ever on guard against their attacks. A light dusting of soot or a sprinkling of fine, sifted ashes about the tender shoots will save the latter from the attacks of slugs. At the present time young plants must be grown in open nursery beds. AVON.



SPRING FLOWERS IN THE LONG BORDER AT HAMPTON COURT.

COLOURED PLATE.

PLATE 1450.

PRIMULA WINTERI.

FROM time to time the hardy plant world is stirred to enthusiasm by the introduction of some novel and striking plant, one that carries with it the impress of an epoch-making subject, a plant for the million, yet beloved of the specialist and those others for whom the best of everything is quite good enough. It has been so in the past, and doubtless history will repeat itself again in the near future if the signs of the times mean anything at all. For example, we well remember the *furor* of thirty-three or so years ago, when the same post, as it were, brought to British gardens a sort of dual prize in the form of *Primulas rosea* and *cashmiriana*, at a time, moreover, when hardy plants were esteemed by the few rather than by the thousands or tens of thousands who grow them to-day, and grow them for what they are worth.

The two plants named are with us to-day, occupying the same unique position as they did three decades ago, in that they are the desired of all. In the case of *P. rosea*, little or no change has taken place, the species bearing itself well with all the dignity and exclusiveness of the aristocrat it really is. True, it has given us, so far as print and catalogue are concerned, a fair number of "majors" and not a few "grandifloras" among others; but none of these, so far as I now recall, has surpassed—a large number have never equalled—those I grew of the original stock in 1879 within the shade and shelter of a high wall in light, sandy soil with a bountiful addition of "fat" cow-manure. *P. cashmiriana*, on the other hand, quite early gave evidence of an innate variability, and promptly gave many shades of lilac, pale purple and white flowered forms varying in their degree of excellence.

It was with the knowledge of the above-mentioned facts still fresh in the memory that I referred in *THE GARDEN* to *P. Winteri* on seeing it for the first time on February 28, 1911, when both the Royal Horticultural Society and the National Hardy Plant Society granted it a first-class certificate as "an absolutely unique plant and the greatest acquisition since the coming of *P. rosea*." Such a tribute, seeing the great wealth and variety of the genus *Primula*, as also the rather long list of good things from China and elsewhere within more recent years, might savour rather of drawing the long bow. Yet I would withdraw no word from that sentence, and I have but little to add thereto.

In passing, however, it may be of interest to remark that the subject of the present note differs from other Himalayan *Primulas*, in that it presents considerable variety, both of form and colour, at

the outset. Some, like those shown in the accompanying coloured plate, have a large white centre, which extends to the tube of the flower. In others the white circle is succeeded by a golden centre, which emphasises the beauty of the plant. The coloured plate, however, affords such a life-like picture of the plant, its ideal character, charm and abundant flowering, that any wordy description might appear superfluous. As shown a year ago and subsequently, the plants were about four inches or so high and covered by a dense coating of white meal. The individual flowers are of the largest *Primrose* size, and vary from pale to deep, as also rosy, mauve. The plant in general



CAMELLIA FLOWERING IN THE OPEN AT LADY TRESS BARRY'S GARDEN, NEAR WINDSOR.

habit resembles the common *Primrose*, except that the flowers are produced in umbels on short scapes. The sturdy, obovate leaves spread out horizontally, as shown in the plate, thus constituting a perfect setting to the flowers.

Seeds of *P. Winteri* were first collected in the Kumaon Himalayas, where it grows at an altitude of 12,000 feet and upwards, not far removed from the limits of eternal snows. At present the entire stock of this fascinating species is in the hands of Messrs. R. Gill and Son of Falmouth, who intend distributing it during the coming autumn or in the spring following. Under cultivation, Mr.

Gill informs me, the new-comer has proved to be most tractable, surpassing most others of its race in freedom and profuseness of flowering. Already this exquisite plant is in great demand, a demand not likely to be diminished as its high-class merits in alpine house and rock garden come to be realised.

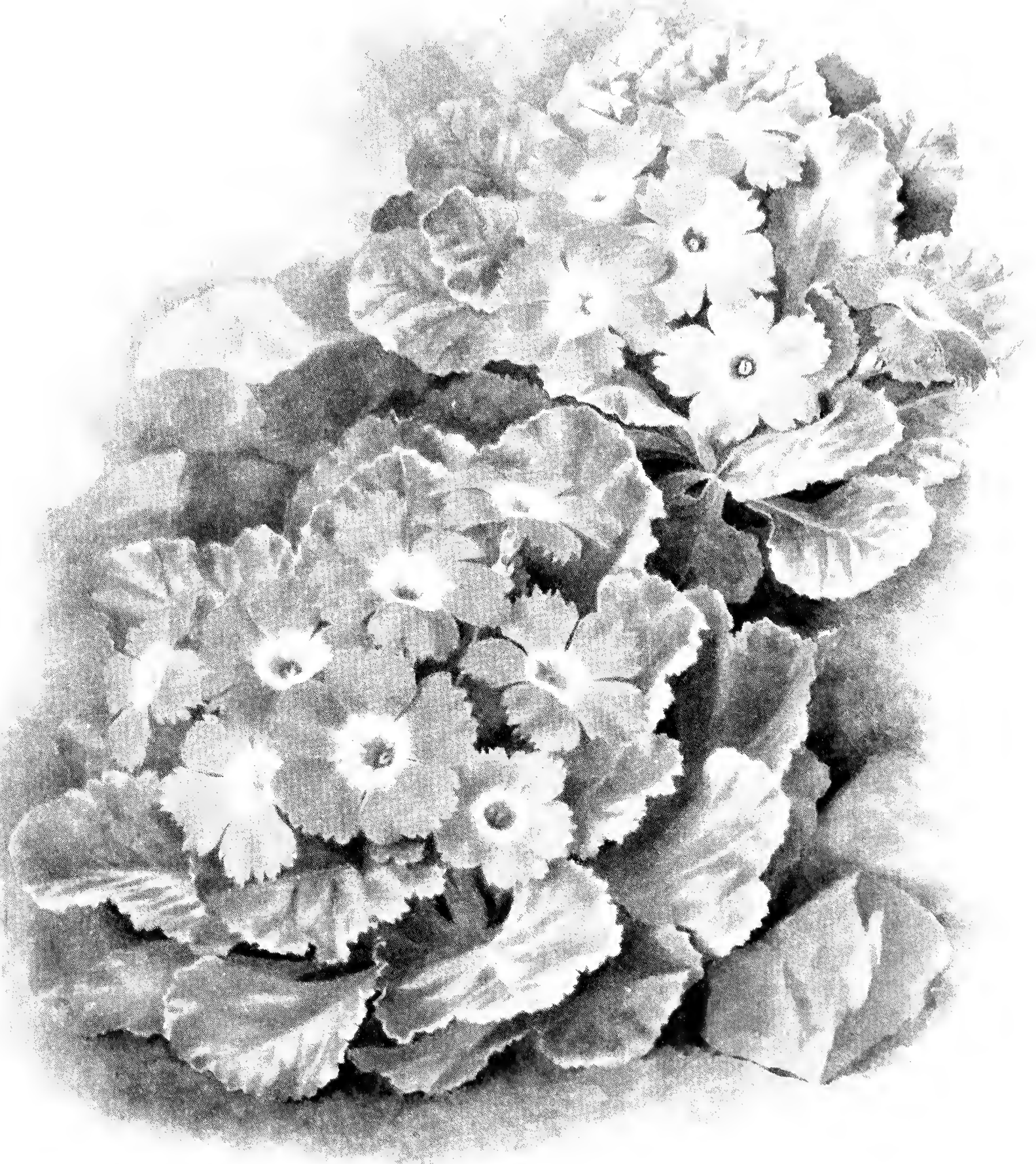
E. H. JENKINS.

THE GARDENS AT ST. LEONARD'S HILL, WINDSOR

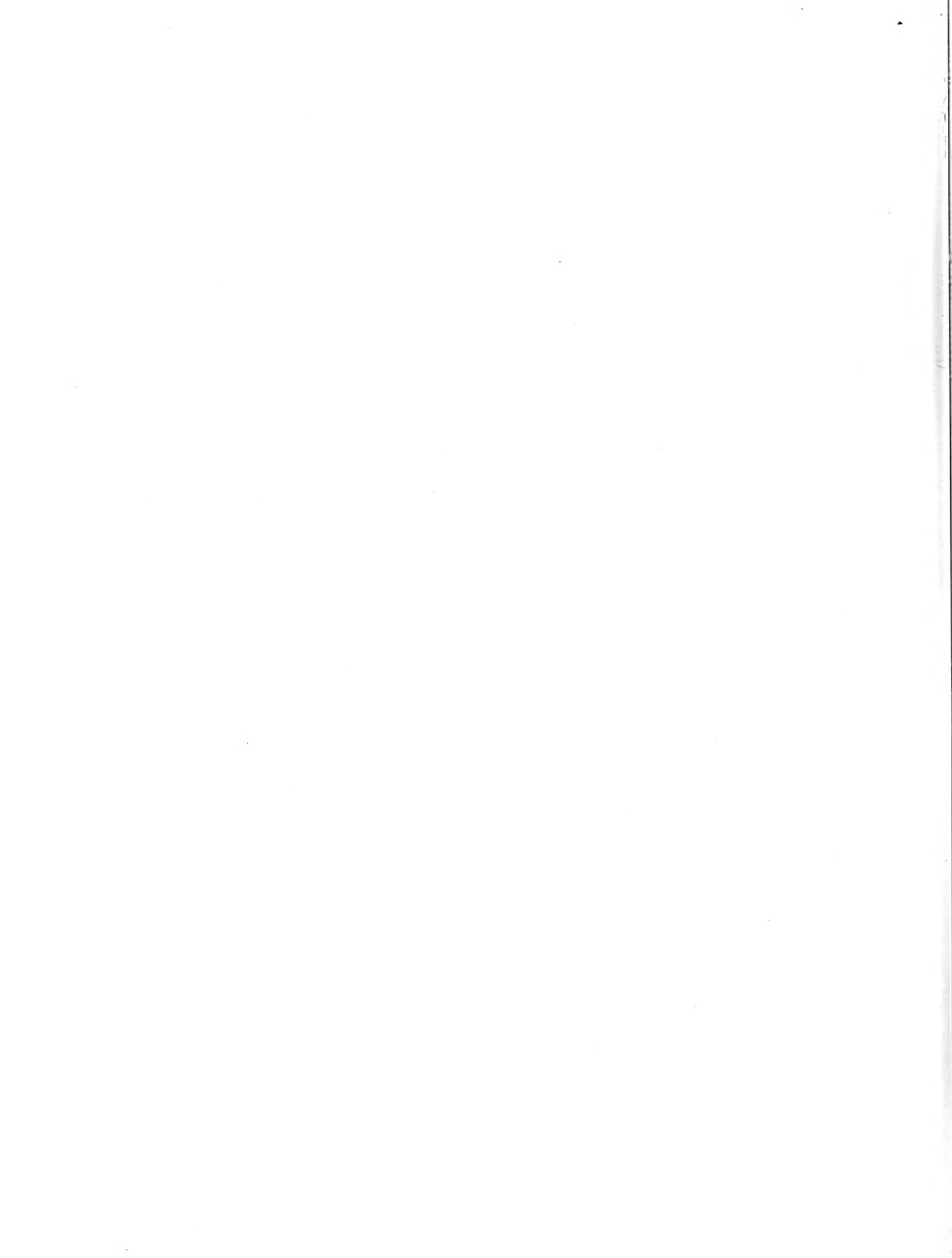
THERE is a popular impression in this country that the *Camellia* is essentially a greenhouse or a conservatory plant, and that it can only be grown successfully outdoors in favoured parts of Devon or Cornwall. As a matter of fact, the *Camellia* is as hardy as, if not more so than, the common Laurel, and by way of emphasising this important feature we depict in the accompanying illustrations robust and healthy *Camellias* in full flower in the open. The illustrations are prepared from photographs taken a few weeks ago in Lady Tress Barry's garden at St. Leonard's Hill, Windsor. Now this garden is situated on the summit of a high hill a few miles out of Windsor, the garden being on a level with the top of the famous Round Tower of Windsor Castle. Moreover, the gardens are fully exposed, especially on the north and east sides, while from the terrace may be had the most magnificent view of the historic castle, with Harrow Hill beyond. The situation is unmistakably open and exposed, and a piercing north-east wind was raging at the time of our visit as if to lay special stress on how bleak and cold the position could be. Yet it is here that the *Camellia* flourishes and flowers so profusely.

A *Camellia* Dell.—On one side of the house is a *Camellia* dell, all bright with glowing scarlets, pure whites and varying hues of splashed pink flowers—verily a sight to be remembered. Some of the earliest flowers are out at Christmas; and while in April the flowering period has reached its zenith, yet flowers are borne right on till the month of June. Not only are flowers so freely borne, but by way of proving its true hardiness, fertile seeds are produced and self-sown seedlings now and then spring up around the parent plants.

A *Camellia* Hedge.—Imagine a hedge of *Camellias* from 15 feet to 20 feet in height and literally covered from the ground-level to the top with bloom. Such a sight greets one in the gardens at St. Leonard's Hill, and it would be difficult to adequately express in words the wealth of bloom to be seen there. That grand old variety *alba plena* (double white) makes luxuriant growth and flowers well, and other varieties worthy of special mention are *Chandleri elegans* (large flowers, light rose), *Valtaveda* (bright pink,



A new hardy Primrose: *Primula Winterii*.





THE DAFFODIL SLOPE AT ST. LEONARD'S HILL, WINDSOR.

spotted snowy white), Bealii (deep red) and the Pæony-like flowers of mathotiana (one of the darkest of double reds). Even the small-flowered Camellia Sasanqua succeeds outside, and this, unlike most varieties, possesses the precious gift of fragrance. Then, again, the beautiful and somewhat rare *C. reticulata* likewise gives a good account of itself in the open. The more exposed the position, the better the plants seem to like it, for under these conditions the wood becomes thoroughly ripened and there is no fear of second growth being made in one season.

When one considers the native haunts of the common species, *Camellia japonica*, which inhabits the mountains of Japan and China almost to the snow elevation, it is not so surprising that it will weather an English winter with impunity. So far as soil is concerned, the ideal medium would be a peaty loam, but there is no peat at St. Leonard's Hill, although there is plenty of leaf-mould in the natural soil. But the *Camellia* is not fastidious about soil, the greatest enemy being fierce winds, which damage the flowers and sometimes break down the plants.

These notes would be incomplete without paying a tribute to Mr. R. Brown, the able head-gardener, who for so many years has associated himself with the outdoor culture of Camellias. Moreover, he has raised many varieties of sterling merit, notably Lady Barry (single white, with golden anthers), Sir Francis Tress Barry (a fine single crimson) and W. C. Brown (deep red single).

It must not, however, be supposed that only Camellias find a congenial home in these gardens, for the flower garden, including the Daffodil slope, bears evidence of good gardening. Magnificent conifers, such as Cedars, Sequoias and Araucarias, form a feature of these gardens,

and one would have to travel far to find better specimens of the Scots Pine than those to be seen at St. Leonard's Hill, Windsor.

DAFFODIL NOTES.

DAFFODILS AT VINCENT SQUARE.

APRIL 16 AND 17.

THE COMPETITIVE CLASSES AT THE "SHOW."

BAD as the year has been "for the purposes of this show," I must confess I was greatly

disappointed with the competition. I thought there would have been more entries and better flowers. It is, however, possible that the ill wind of 1912 may bring good for another year, should such a show be held, for people will have seen how *exceedingly* easy it is on occasion to gain the coveted gold and silver-gilt medals and the silver cups of the Royal Horticultural Society. Reading Regulation 6 in the schedule book, I rubbed my eyes when I saw the awards.

This is what it says: "The Council reserve to themselves the right to withhold any of the Cups or Medals offered if in their opinion the exhibit is not worthy of any, or only of a lesser award." As regards the visiting public, I do not wonder that many were a little nonplussed when they read the award cards, and wondered what the Council had been thinking of when they dispensed their favours thus—"not wisely but too well." And it was *not* the day of the eclipse.

The "Seedling and New Daffodils" Division

was a great centre of attraction for the experts. What Engleheart's and Wilson's groups are to the others at the usual fortnightly meetings, so were the classes in this section to the others in the "show." When Mr. E. M. Crosfield and when Mr. P. D. Williams are "there," one instinctively knows that one is going to see something good. But the call brought others in. It was heard in Holland. Mr. E. H. Krelage replied in person, and came with a beautiful reminder of his wife in the shape of an exquisite almost white Daffodil, Mrs. Ernest H.



A HEDGE OF CAMELLIAS IN THE OPEN. THESE PLANTS OFTEN PRODUCE SEED.

Krelage, which won all our hearts. It is rather a fascinating idea for a short absence to take about a flower instead of a photograph; but in this case would-be buyers probably voted it a too extravagant one, as naturally the value of the reality passed into the presentiment.

Other notable raisers who sent seedlings were Messrs. A. M. Wilson, C. H. Cave, F. H. Chapman and J. Mallender, while to the new varieties not in commerce Messrs. Bourne, Cranfield, Welchman and the Rev. T. Buncombe each contributed his share. This latter gentleman is a very keen enthusiast, and makes the very best of the varieties he cultivates. There were two exhibits of a fine white Ajax, Sybil Foster, but it was Mr. Buncombe's three that drew the attention of the visitors. In the competitive classes generally one was glad to see how wide was the zone of attraction, even if the entries were few.

Trade Groups.—These surpassed my expectations. One was pleased to see Ireland in such force. The little lot of home-raised seedlings that Lissadell included in their group were a cocktail to whet our appetite for another year. I know there are a great many there, and the time must be near at hand when they will be old enough to be presented. A second feature of these groups was the novelty of Miss Currey's arrangement. I must say it appealed to me very much, and seemed about as good a plan as anyone need wish to see. For once there was no intermingling and confusion of sorts. Each stood out by itself, and its merits or demerits could be seen at a glance. What say, Mr. Editor, your three correspondents?

What about America?—Two little lots of handsome flowers were noteworthy, partly in themselves because of their excellence (e.g., Mrs. Ernst H. Krelage and Zwanenburg, two of the best of all pale bicolors, the one for the show and the other for the garden), partly because they came from Holland. We are more or less familiar with the efforts of our Dutch cousins in a living state, and it reminds me that I missed that grand old man of Holland, Mr. G. H. van Waveren. A month ago he told me he hoped to be present, but fourscore years and two must often prevent the bearer of its burden doing what he would. I thought of him often, more especially because his Queen Emma has this year revealed itself in my garden as an excellent show flower. Writing with no lists beside me, I am unable to state its price, but it cannot be very expensive, and to those who want a good early bicolor trumpet I say, "Try Queen Emma." Now this coming over from Holland leads me on to note a suggestion that was made to me last year, viz., the possibility of our English growers all putting first their heads and then their flowers together and sending just one or two of the former and a whole lot of the latter over to America to show the great army of American flower-lovers what can be done with the *Dafnoid*. There is to be an immense exhibition there in early April of next year, and as our flower takes kindly to water, there would be no insuperable difficulty in conveying a large and representative collection across the Atlantic. It might create an outlet for our seedlings. No one can deny that one will be wanted soon, if it is not now *Vcrb. sap.*

JOSEPH JACOB.

NARCISSUS CRÆSUS.

THE rare honour of a first-class certificate was recently bestowed upon this flower by the Narcissus committee of the Royal Horticultural Society

when shown by Mr. A. M. Wilson of Bridgwater. As already described in our pages, this unique variety is a giant incomparabilis with a circular, widely-segmented perianth of a pleasing shade of sulphur yellow and a large, widely-expanded cup, which constitutes a blazing orb of fire. It is magnificent.

CONCERNING THE HARDY WATER LILIES.

Time to Plant or Divide.—The right season of the year, so far as my experience has taught me, will soon arrive when these lovely floral gems of our lakes, ponds and pools may be safely planted, or, if needful, be divided and planted afresh.



NARCISSUS CRÆSUS, A BEAUTIFUL NEW VARIETY (MUCH REDUCED).

I have found the end of April or early in May to be the best and safest time to plant or divide. When I received my first consignment of plants, now some years back, they were so small that I planted them in shallow Strawberry punnets some ten inches or so across. I found them to do well the first season in these small receptacles. The following winter I lost one only, viz., *Nymphaea flava*, which I ought not to have attempted; but we must learn some things by our failures as well as by our successes.

I removed them the following spring and placed them into old nursery round baskets of about two feet in diameter. In these they remained for about two years. Then I put them into

larger and similar baskets, some 3 feet and some 4 feet in diameter, in accordance with the vigour of the plants. The next process, a few years later, was to divide the stools, making some three or four separate planting crowns of each of the strong-growing kinds. Others that do not grow so strong—as *Nymphaea odorata* and its varieties—were not so sub-divided. All of this work I have done as stated either late in April or early in May, according to the season.

This spring, for instance, it may be assumed that late April will be suitable. When using the larger baskets, we used to slide them back into the water upon two running planks, and pull them as far as needful by means of ropes from the other side of our pond. It is quite necessary, in every case, to secure the crowns in their baskets by means of string that will ultimately decay.

Reasons for Division of Crowns.—The reason why some of the more robust varieties need subdividing is the dense growth that is made and by the numbers of offsets. The *Marliacea* section as represented by *N. Marliacea chromatella*, *N. M. albida* and *N. M. rosea* are all vigorous growers. Thus it will frequently happen that the leaves will thrust themselves far above the surface of the water, instead of floating, as they should do. The remedy for this is division, and afterwards to place them, wherever possible, into deeper water. These varieties and others that possess long petioles, or leaf-stalks, indicate by this distinctive feature that deeper water will suit them. I have seen *N. M. chromatella* thriving in as much as 9 feet of water, and frequently in 6 feet or thereabouts.

The Best Soil to Use.—My practice has been to use good fibrous turfy loam mixed with road scrapings and some decomposed leaves. The latter I prefer to use at the bottom of the baskets. This soil should all be made as firm as it can be by using the hands only. I do not recommend animal manure of any kind whatever. Some, I know, do use it, and for one season perhaps it may be beneficial in some cases. I am, however, disposed to form an opinion that by the use of such stimulants a disease is engendered. This has been known to be the case. There is, I consider, quite sufficient detritus in our waters for Water Lilies to thrive well without such manures being employed.

The Best Positions to Choose.—It may be accepted as a general guide that all Water Lilies thrive best in the full sunshine, at least for a part of the day. Any excess of shade is prejudicial to their well-being. Those that possess flowers of the deepest shades of colour all look at their best when the sun shines upon them; then they sparkle like so many diamonds upon the surface of the water. Still water is best for them at all times. Running water, where the motion is quite perceptible, is not congenial to them. I noted this once when going up the Rhine from Cologne to Mayence, on my way to Frankfurt. I watched closely for any symptom of Water Lilies, but only desisted them in quite a sheltered pool, or backwater, so to speak, where the water was comparatively motionless. I observed the same upon the Norwegian Lakes. It was only in the more sheltered recesses that they appeared to revel. In a mountain tarn well above Coniston Water I saw this same characteristic. It may, I think, be taken as an accepted fact that the quieter the water is the better will they thrive.

JAMES HUDSON, V.M.H.

(To be continued.)

GARDENING FOR BEGINNERS.

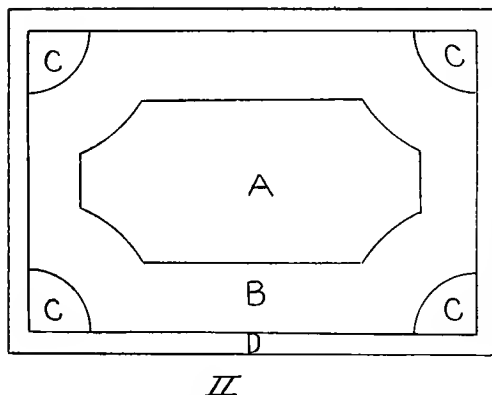
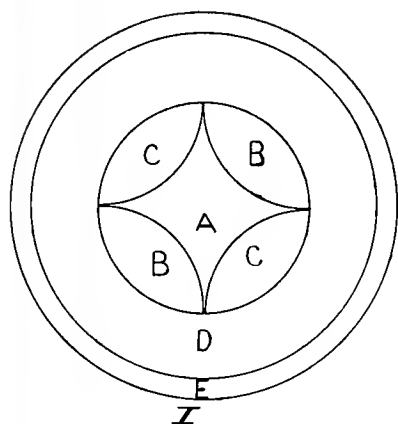
HOW TO BED OUT SUMMER-FLOWERING PLANTS.— I.

THE filling of borders with summer-flowering plants is very interesting work. Persons who have had considerable experience know quite well that the best effects are obtained when the designs are simple. Complicated designs cannot well be worked out unless the beds are very large and small-growing kinds of

Distance Apart for the Plants.—Zonal Pelargoniums, 1 foot; those used for edgings must be planted closer. Tuberous Begonias, 1 foot to 15 inches; fibrous-rooted Begonias, 8 inches; Violas, 8 inches to 10 inches, according to the size of the plants when put out; Heliotrope, 15 inches (these plants spread); Salpiglossis, 14 inches; Godetias, 10 inches; Nemophila,

order to get the same desirable results when they are grown in a sandy rooting medium, a good surface mulch must be put on early in spring and be renewed in due season. The object of the mulch is to keep the roots near the surface, but to prevent undue dryness there and consequent inaction of the roots. Furthermore, the plants will be brought to that condition when they will be capable of taking up much nourishment, so feeding may be commenced early. Then, if all faded flowers are regularly picked off, the plants will continue to blossom throughout the summer months.

Of course, these are plants that do better in some positions than in others, and, fortunately, they succeed remarkably well in borders facing north, east and west, borders on which the sun shines very little. Cultivators often experience a difficulty in procuring suitable plants for such borders. Pansies may be planted 1 foot apart, Violas 10 inches, the last-named not growing quite so strongly as Pansies, being more compact in habit. Any time now, when the soil can be had in a nice workable condition, the plants may be put out in their flowering quarters.



USEFUL DESIGNS FOR SUMMER BEDDING.

plants are used, such as those employed in carpet-bedding.

The accompanying designs may be easily made by an inexperienced person, and also as easily filled with inexpensive as with the more choice and expensive kinds of plants.

Fig. 1: A, Zonal Pelargonium Paul Crampel; B, Zonal Pelargonium Flower of Spring; C, white-flowered or cream tuberous Begonias; D, tuberous Begonias, mixed colours; E, white Violas as a broad edging.

The Same Bed Filled with Annuals.—A, Eschscholtzias; B, Godetia Duchess of Albany, white; C, *Jacoea elegans alba*; D, Godetias, mixed colours; E, *Nemophila insignis*, blue, as a broad edging.

Fig. 2: A, *Fuchsia Mrs. Marshall*; B, Zonal Pelargonium Paul Crampel; C, pink-flowered fibrous-rooted Begonias; D, blue *Lobelia*.

The Same Bed Filled with Annuals.—A, *Salpiglossis*, mixed colours; B, *Linum grandiflorum rubrum*; C, *Saponaria alba*; D, *Mignonette* as an edging.

Fig. 3 shows a long, narrow border. Such borders are formed near paths as well as on lawns, and with Box or tile edgings. They may be planted with different kinds of plants in straight lines (to form ribbon borders) or in scrolls, as well as in the way shown. A, Zonal Pelargonium Henry Jacoby; B, Heliotrope; C, Zonal Pelargoniums Flower of Spring or Little Dandy as an edging.

The Same Bed Filled with Annuals.—A, *Zinnia elegans grandiflora robusta plenissima*; B, *Phlox Drummondii*, mixed colours; C, *Tagetes signata pumila*. The different kinds of plants recommended will continue to flower throughout the summer months, so that there will be no gaps or lack of blossom at any time, a very important matter.

7 inches. *Mignonette* must be thinned out to 6 inches apart from seedling to seedling.

The Soil.—This must not be made very rich for Zonal Pelargoniums; moderately rich for Heliotrope, *Mignonette*, Begonias and *Nemophila*; not very rich for *Phlox Drummondii*; rich for *Salpiglossis* and Godetias. All organic manure used so late in the season must be well rotted. G. G.

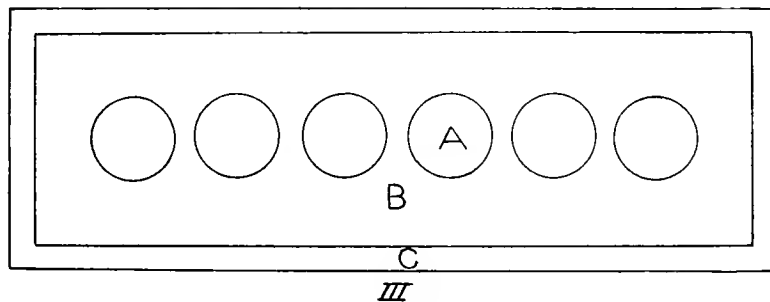
PLANTING PANSIES AND VIOLAS.

THERE are not many lovers of a beautiful garden who do not also take a delight in growing Pansies and Violas. Some, however, think that it is useless to attempt to grow these plants in the Southern Counties, and that they can only be successfully cultivated in the Northern Counties. This is a mistake, and many readers of THE GARDEN will be pleased to learn that the writer has grown them extensively in the South, and, moreover, in a rather sandy soil.

It is an important point that the soil be deeply trenched and made rich with well-rotted manure before any plants are put in. Although they are dwarf subjects, they possess many roots when well grown, and the latter penetrate the soil to a considerable depth. When grown in soil inclined to be clayey, the plants grow very sturdily and the flowers are of great substance. In

GREENHOUSE MILDEW IN SPRING.

As the days lengthen and the cold east winds come in company with strong and increased sunshine, the horticulturist will experience some difficulty in keeping down mildew, especially on plants in greenhouses and unheated conservatories. The cultivator of greenhouse plants whose experience is limited is apt to admit plenty of cold air in the early part of spring when the sun shines brightly. Now if, through so admitting air when it is rather cold, the plants get chilled, mildew and green fly will spread on the young shoots. By all means admit air, but not in great quantity, and, if possible, open the ventilators so that a direct current of it will not blow on the tender foliage. It is well worth while to go to the trouble of fastening some coarse scrim over the ventilators inside the house, then the air, filtering through, will not cause any spread of mildew. The proper way to ventilate is to open the ventilators a little way early, and to increase the width gradually as the outside temperature rises. If a house be found to be very hot from sun-heat, damp the floor a little and very gradually increase the ventilation. Flowers of sulphur dusted on the leaves will cure mild attacks of mildew; but when plants happen to be badly affected a solution of sulphide of potassium at the rate of 1 oz. per gallon of clear water will effect a cure if carefully syringed on. SHAMROCK.



PLAN OF A NARROW BORDER ON A LAWN.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Plant-Houses.

Humeas.—To encourage good specimens give the plants a shift into 10-inch pots. Use well-drained, clean pots and a compost of equal parts loam and leaf-mould, some sharp grit and a sprinkling of crushed brick. Water very carefully, or the plants will probably succumb.

Bouvardias.—If the old plants are to be retained, they should be potted after growth has recommenced, and grown in a frame for a time. In many localities, especially where a sheltered site is obtainable, the plants will make good growth if planted out for the summer months. Pot on cuttings when necessary, and stop the plants to induce a bushy habit.

Chrysanthemums.—Give an abundance of air on all favourable occasions, removing the lights entirely on mild days. As the pots fill with roots, assist with liquid manure-water and syringe the plants twice daily. Aphid in the points of the growth may be killed with Tobacco powder dusted into the shoots when the foliage is wet, or by dipping the affected parts in Tobacco-water. Keep a sharp look-out for rust, and if only in small quantities, pick it off and burn it, or syringe weekly with salt and water at the rate of a tablespoonful of salt to a pail of water.

Cyclamen.—These plants will soon need a further shift. Use clean, well-drained and perfectly dry pots, so that when ready for their final potting the soil leaves the pots readily, thus avoiding injury to the roots. Be careful not to bury the corms under the soil. When finished, they should be halfway above. Water carefully, keep for a time in a warm house, shade from bright sunshine and maintain a humid atmosphere.

The Kitchen Garden.

Runner Beans.—A capital practice is to sow the seeds in shallow boxes, as recommended earlier for Peas. By adopting this method all risks of the seedlings being eaten by slugs just as they are emerging is eliminated, and from plants raised in this manner earlier crops are secured. Place the seeds about two inches apart, and stand the boxes on a good firm base, preferably cinder-ashes, in a cold frame.

Beetroot.—The early part of next month is the most suitable time for sowing the main crop of this vegetable. Prepare the ground similarly to the way advised for Carrots. Draw shallow drills 1 inch or 2 inches deep, sow the seed thinly, and rake the bed over neatly at the finish.

New Zealand Spinach.—Make a sowing in the open border now. Draw the drills 2 feet 6 inches to 3 feet apart, and allow nearly the same distance between the plants when finally thinned. This crop enjoys a hot position, and is an excellent substitute when the ordinary Spinach fails.

Asparagus.—As the young shoots show through the beds and late frosts are likely to injure them, cover them over with some loose material, such as Braeken or litter.

Cauliflowers.—Continue to plant out on well-prepared ground and make quite firm. In the event of dry weather, give each plant a good watering at the base. Make another sowing now.

Cabbages.—Plant out on good ground those that were raised in boxes in a cold frame during March.

Tomatoes.—Young plants intended for outdoor cultivation must be kept sturdy with a free admission of air, and given a shift into 5-inch pots. Gradually harden off, so that by the end of the month these will be quite acclimatised for permanently planting out.

The Flower Garden.

Water Lilies.—The present is the most suitable time for planting or dividing *Nymphaeas*, and where an open piece of water exists exposed to the sun, these may be cultivated. Varieties should be planted according to the depth of the water. The best means I know for planting is to use old wicker rounds. Make the plants quite firm in some holding soil and sink into the desired position, and if the bottom of the pond or pool is muddy, these will quickly establish themselves.

A few strong-growing ones for a fair depth of water are *N. Marliacea carnea*, *N. candidissima*, *N. Marliacea chromatella* and *N. Laydekeri purpurata*. Of smaller-growing varieties there are many suited for shallow water, of many shades of beautiful colour, but they are generally less vigorous than the above.

The Golden Club (*Orontium aquaticum*).—This is a most interesting plant, flowering in advance of the Water Lilies. It is easily obtained and established.

The Water Hawthorn (*Aponogeton distachyon*) has deliciously fragrant flowers unmistakably like Hawthorn. This plant is now flowering profusely. It is perfectly hardy, and well adapted to shallow water and a running stream.

Half-Hardy Annuals.—Where lack of indoor accommodation does not permit of the seeds being sown earlier under glass, many can be sown now out of doors in carefully-prepared ground, and be relied upon to produce a good display, though, of course, later than those sown earlier, but they will be found to provide a good succession.

Violas.—Where it is customary to plant out in the Rose-beds, let this be proceeded with at once. Make the surface soil fine, and if the weather is dry, sprinkle the plants each evening. For a time keep the flowers removed to induce the plants to make a freer growth.

Fruits Under Glass.

Figs.—Forced pot trees will soon be ripening their earliest fruits, and water must be withheld in reason. Permanent trees that are swelling their earliest crop must be assisted with plenty of manurial stimulants, especially where the roots are confined. Keep the syringe going frequently among the foliage twice daily, and maintain plenty of humidity in the house, closing early to take full advantage of the sun's rays. Disbud growths on later trees where they are too crowded, and stop the shoots, except where required for extension, at the fifth leaf. Figs should not be picked until thoroughly ripe, which is generally denoted by the skin cracking.

Cherries.—Attend to the stopping of the growths, except where required for extension. If this is done now, little pruning will be required in the winter-time and the trees will be less susceptible to gumming. Later trees will benefit by a light shading placed on the roof when the sun is very hot.

Latest Peach Trees and other fruits will need retarding as much as possible by admitting all the air possible, opening the doors on warm days and leaving abundance of air on during the night, except, of course, when there is likely to be a sharp frost.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Muscat Vines.—About this date the majority of these are in flower, and, should the weather be cold and sunless, it is imperative that the heating apparatus during the day shall be kept going, so that the setting of the berries may be facilitated. A little ventilation at the apex of theinery also contributes to perfect fertilisation.

Young Vines.—Those planted a month ago should now be making growth. Meanwhile water must be carefully applied, so that the soil is not soured. There is no doubt that a very moist soil induces rapid growth, especially when the temperature is high and the atmosphere saturated. But none of these conduces to the future well-being of the Vines.

Pot Vines.—If the eyes inserted in January have made good progress hitherto, the plants will now be forward enough to benefit by being shifted into pots that hold a fair amount of compost—7 inches at least—and as soon as the roots have taken possession of the soil in these, another shift should be at once provided. If warty excrescences appear on the leaves, it may be accepted as an indication that too much moisture is being applied and perhaps too little fresh air.

The Kitchen Garden.

Vegetable Marrows.—Sow one seed in a 4-inch pot to the number required. Give a warm

greenhouse temperature, and the plants will be strong and hardy for planting early in June.

Herbs.—Basil and other herbs from seeds may be sown at once. Where Thyme dries out, sowing is often the only way to procure a sufficient supply. Sage cuttings put in last autumn are now ready to transplant. Cut off the flowering stems of Sorrel as they appear.

Seakale.—Those crowns covered with fine coal-cinders should be examined lest any go to waste. When placed close to a sheltered wall, they push much sooner than those covered in the open quarters. The forcing material may now be removed in such instances, as the crop is forwarded in this way, and the ground pointed deeply as soon as convenient.

Pickling Onions.—Where these are required, seeds of the silver-skinned variety should be sown at once, and only enough seeds sown to produce a crop of small bulbs without having recourse to thinning the seedlings. The rows need be no wider apart than will permit of the working of a Dutch hoe between them. Heavily-manured ground is not essential.

Parsley.—Seedlings raised under glass should not be left too long untransplanted, and, as a rule, this date should see them planted into beds in the kitchen garden. They grow into nice little clumps, each about fifteen inches through, if the variety is not a coarse one. Loose, porous soil should be well firmed previous to planting. Soot is a suitable manure, being at once a gentle stimulant and a deterrent of ground pests.

The Flower Garden.

Mowing.—Now that lawn-mowers are once again started for the season, a word may be admitted advising cutting at short intervals. The lawn is kept in superior condition, and though it might appear to need more labour, with the usual light-running machines that is not the case.

Shrubs.—There are always gaps in shrubberies to be filled up, and also shrubs growing so close together that one has to be sacrificed for the other. During weather when other operations are at a standstill it is worth while to carefully root-prune instead of destroying these, and in a few months they will be ready to transplant where required.

Perpetual-Flowering Carnations.—The value of these for summer blooming is now widely recognised, and both those struck in autumn and those which have been flowering all the winter may be planted at once. The last-named must be planted just as they are, and each have a strong 5-foot Bamboo cane for a support. I have tried them planted level with the soil and the top of the ball sunk a little below the surface, with the result that the deeply-planted ones were the better. Britannia and Mrs. Burnett are perhaps the two best varieties for this purpose.

Seedling Gladioli.—These ought not to be left too long in the seedling receptacles; but now that they are well up, if hardened, should be transplanted into the reserve garden. Dibble them in rows just wide enough to permit of hoeing between, and the plants need not be more than 3 inches apart. Provide for them being left in the ground over the winter, a thick covering of leaf-soil or straw to be placed over the beds as a protection. They will turn out good corms the second year.

The Plant-Houses.

Primulas.—Sow seeds of various Chinese Primulas, also of the pretty *P. malacoides*. Let the seeds be merely covered.

Double Begonias.—For autumn flowering the tubers which are now starting into growth should be planted into pots suitable to the size of each. They succeed perfectly in an unheated structure and, till roots are active, require little water at the root.

Begonia Gloire de Lorraine.—The main batch of cuttings should be ready for taking. They may be rooted either in pure wet sand, like Perpetual-flowering Carnations, or singly in 2-inch pots in a very light, porous compost, and from these, as soon as the roots are fairly well round, the balls should be transferred to 4-inch pots, using compost of the same kind, but slightly more coarse. They must be very loosely potted. Plants not used for cutting production will flower all the summer in the greenhouse.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Carnation Wodenethe.—A pure white-flowered American variety of the largest size and with all the evidences of boldness and bigness. The variety has a strong perfume, and for that attribute alone will be welcomed by all lovers of the flower. Exhibited by Messrs. Wells, Merstham.

Freesia Tubergeni Le Phare.—A charming addition to a delightful group. The flowers are coloured a rosy red. From M. Van Tubergen, Haarlem.

Cineraria hybrida.—A new hybrid of floriferous habit. Parentage: *Cineraria cruenta* × *Senecio tussilaginis*. The flowers have pale blue tips and purplish centres. Shown by Messrs. James Veitch and Sons, Limited.

Auricula Roxburgh.—An alpine variety of handsome proportions. The flower is large, shaded purple, and merging to blue at the margin; the creamy white centre is large and well defined. A very fine addition. From Mr. James Douglas, Great Bookham.

Narcissus Mrs. Ernst H. Krelage.—A white Ajax form after Mme. de Graaff; more finely and handsomely proportioned, however, and minus the rolled rim of the latter's crown. From Messrs. E. H. Krelage and Son, Holland.

Narcissus Silver Spangle.—This in the new order of things would, we presume, be a Barri. The perianth segments are white, the flattish crimped crown of lemon yellow being of the Engleheartii type. From Mr. F. H. Chapman, Rye, Sussex.

Narcissus Seville.—The perianth segments are white and of considerable substance. The orange eye or crown is of the Engleheartii type, the variety making its presence felt in quite a large collection of good things. Exhibited by Mr. H. D. Phillips, Olton, Warwick.

NEW ORCHIDS.

A first-class certificate was granted to *Odontoglossum crispum* Saga, a magnificent variety carrying seventeen flowers on a spike, shown by J. Gurney Fowler, Esq.

An award of merit was made to *Cattleya Mendelii* Thule, also from J. Gurney Fowler, Esq. The latter is a large white variety with a faint pink tint. A similar award was made to *Lælio-Cattleya* Bertram, shown by Francis Wellesley, Esq. A rich golden-coloured hybrid with a deep ruby red lip. Parentage: *Lælio-Cattleya* Hopkinsii × *L.-C.* Cappei.

The foregoing plants were shown before the Royal Horticultural Society on April 16, when the awards were made.

THE EDITOR'S TABLE.

Gentiana verna from Bavaria.—Mr. E. Heinrich, Planegg, Bavaria, sends a large box of this beautiful alpine gem, which arrived in excellent condition, thanks to good packing. The rich blue colour of the flowers was very intense, and the tufts were exceptionally fine. Accompanying the flowers was the following verse from a poem by Mr. Heinrich in praise of this *Gentian*:

GENTIANA VERNA.

Hail thee! spring's harbinger, one of the first
Of priceless gems, which on the highland glade
From Nature's vari-coloured pallet burst;
Born near light's portals, thou furl'st up in shade,
Lest weeping night contaminate with dew,
Or sombre clouds bedim thy faithful blue.

ANSWERS
TO CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

TO PROPAGATE A TREE PÆONY (S. W.).—It is usual to propagate Tree Pæonies by grafting young shoots upon tubers of the common garden Pæony. This is done indoors in warm, close propagating-cases in spring. Tubers with roots attached ought to be placed indoors two or three weeks before they are required for grafting. The scions may be worked on either as side or cleft grafts, the latter being the best method. The union takes place within a space of two or three weeks, when air must be gradually admitted to the case, and the young plants eventually hardened off and stood in a cool frame.

PLANTS FOR A DRY BANK (F. T.).—The following shrubs would do well on the bank you mention: Double-flowered Gorse, Lavender, Cotton Lavender, *Cistus laurifolius*, *C. corbariensis*, *C. monspeliensis*, *Helianthemum formosum*, *H. ocyroides*, *H. vulgare* and varieties *crocatum*, *croceum* (single and double), *enpreum*, *Fireball*, *mutabile*, *roseum*, *rhodanthum*; *Hypericum calycinum*, *Genista pilosa*, *Cytisus scoparius* and varieties *sulphureus*, *pendula* and *andreaeanus*; *Spartium junceum*, *Berberis stenophylla* and *B. Aquifolium*. The various forms of *Helianthemum vulgare* only grow about 6 inches high; therefore they ought to be given front places. All the subjects mentioned are easily grown. We do not think you would find a mixture of shrubs and herbaceous plants satisfactory in the position described.

SOWING SEED OF HARDY PERENNIALS (P. C. M.).—Of those named, the more easily raised without the aid of a greenhouse or frame would be *Alyssum*, *Anchusa*, *Antirrhinum*, *Aquilegia*, *Aubrietia*, *Campanula*, *Delphinium*, *Gaillardia*, *Galega*, *Lychuis*, *Gypsophila* and *Eoothera*. The better way would be to prepare a plot of ground in a sheltered place in the open, make the soil fine and sandy, and then draw a series of drills a few inches apart for sowing the seeds. Your guide as to depth will be the seeds themselves, the finer seeds requiring little or no covering, the larger seeds to be covered half an inch or so with soil. Hence a small hoe and line or a blunt-ended stick for drawing the drills would be all the tools required, covering each kind as the work is completed and affixing a label at the end of each row. "Sow thinly" is an oft-repeated piece of advice, but so necessary if you desire sturdy plants in the end.

SOWING ANNUALS FOR EARLY AUGUST FLOWERING (H. K.).—It is quite time the whole of the annuals named in your list were sown; some, indeed, *Cosmos*, *Scabious* and *Lavatera*, would have been better sown a little earlier. With the exception of *Eschscholtzia*, *Nigella* and *Mignonne*, which do not, as a rule, transplant well unless the work be done early as well as carefully, the whole of the remainder may be so treated. Tap-rooting things like *Mignonne* and *Eschscholtzia* have few root fibres; hence the reason of the difficulty in transplanting them. In such instances, however, you might press a seed or two into a pot of soil, and later plant out each pot bodily without disturbance. By these same means you could sow a portion of the seeds now and a further portion a week or so later, and in that way endeavour to suit the time. In these matters, of course, we can only generalise, the variability of the season being more than we can foretell or foresee. Sow the seeds at intervals as suggested, and make notes of their progress and the weather for your future guidance.

FRONT GARDEN OR FORECOURT (H. A. H.).—You cannot, we think, do better for the summer months than plant the beds against the wall with a row of rather tall plants of the pink Ivy-leaved *Pelargonium* Mme. Crousse obtaining in mid-May examples in 5-inch pots and setting them out 18 inches apart. In front of these you could bed tuberos *Begonias*, which flower splendidly in such positions, and, moreover, do not scorch. These latter are available in white, pink, crimson, scarlet and orange, so that you could select to suit your taste. You need have no fear about these *Begonias*, since we are speaking from the experience of years, and a cold clay soil to boot. An alternative idea would be a row of Sweet Peas at the back and the Ivy-leaved *Pelargoniums* in the front. In this instance it would be necessary to dig down vertically 18 inches from the wall, and cut away all the Ivy roots which rob the soil, planting the Sweet Peas in a trench of well-prepared soil. For the *Begonias* and others good prepara-

tion of the soil also would be necessary. For the Rose-beds, *Viola* Florizel or *Magne* Mott would be excellent, or the fragrant-flowered *Holotrope* pegged down at first and subsequently allowed to grow and flower unchecked.

TREES AND SHRUBS.

EVERGREEN FOR A LOW WALL (D. T.).—We advise you to cover your low wall facing north with a mixture of Ivy Emerald Green and the winter-flowering *Jessamine*, *Jasminum nudiflorum*. These will grow together, and give little trouble save an annual pruning after the fall of the *Jessamine* flowers. You will, of course, have to nail the latter plant up until it covers the desired space.

A SHADY SHRUBBERY (G. P. N.).—There is not a very wide selection of shrubs suitable for the position you mention beneath the trees. The following would be the most likely to succeed: Common Holly, common and Oval-leaved Privet, common and Portugal Laurel, *Rhododendron ponticum* and other kinds in the more open places, *Berberis vulgaris*, *B. Aquifolium*, *Aucuba japonica*, Tree Ivy, common Box, Yew and *Genista virgata*.

TO REMOVE A CEDAR OF LEBANON (Mrs. D. G.).—A good time to transplant your Cedar of Lebanon would be during April or the early part of May. There is no reason why the tree should not be transplanted successfully, providing ordinary care is exercised. As we do not know what the size of the tree is, we cannot do more than give general instructions. Assuming that it is about fifteen feet high, with a trunk 5 inches or 6 inches in diameter, the first thing to do is to secure three or four pieces of soft rope, each about fifteen feet long, to the trunk, about six feet from the top, as guy ropes to steady the tree. Then tie the lower branches up to the trunk. Afterwards mark out a square base with the trunk as the centre. Then dig trenches at opposite sides of the tree to face the new position you have prepared for it. These trenches must be made to a depth of several inches below the lowest roots. Then undermine the centre of the ball, the tunnel being wide enough to admit two strong planks, each 11 inches wide and 3½ inches thick. The planks should protrude 6 inches from each side of the ball. Pack the planks up tightly to the ball, then dig out the other sides of the square. Bind the ball with stout canvas, using upright pieces of batten, 2 inches to 3 inches wide, outside the canvas, so that the securing ropes will not cut into the soil. Bind as tightly as possible. This is best done with pieces of stick pulled through the binding ropes and used as a tourniquet. When this is done, undermine the whole side of the ball above each end of the central planks and insert a board 9 inches wide and 1 inch thick in each side; then undermine the remaining sides in the same way and insert similar boards, with their ends resting on those of the first pair. Pass ropes round the ends of these boards and secure them firmly to the base of the trunk, using canvas to save the bark from injury. The tree will now be ready for lifting; but before this can be done a long incline must be made to the bottom of the hole. When this is done, lever the whole mass up from one end high enough to insert planks and rollers beneath the ball, the central planks first inserted being used to roll on. While this is being done, a man must hold each guy rope to keep the top steady. When the rollers are inserted, gradually pull the whole mass out of the hole by means of a long rope, and block and tackle if necessary. Roll the tree to its new home and run it down an incline into the hole. A channel, wide and deep enough to receive the middle planks, may then be easily drawn out after the rollers, &c., have been removed by leverage. Arrange the tree in a perfectly upright position, take out the four 9-inch boards, pack round with soil, then remove the canvas from the lower half of the ball. Fill in more soil and ram firmly about the ball; eventually remove the canvas and fill in to within a few inches of the surface; give a good watering and, when settled, finish filling the hole with soil. Secure the guy ropes to stakes driven firmly in the ground so that they cannot be disturbed by wind. Be careful to have plenty of strength for the actual moving of the tree. If, when you have made the ball round the tree, you find that there are not many roots showing, you may safely reduce the soil by means of a fork, for it is no use moving more than is absolutely necessary. To save pulling the tree out of the hole, you might open a trench from one position to the other and roll it along the bottom. This, however, entails more work.

ROSE GARDEN.

MARECHAL NIEL FAILING (Grace Darling).—We can assure you the experience you relate is not uncommon. We fear much of it is traceable to the plants supplied. They are grown in such great heat, in order to have them as large as possible, that their constitution seems to be undermined. We have had the greatest success from plants grown out of doors, either as standards or as climbers on the seedling Briar. It is too late now to plant one, but next autumn we advise you to obtain a good healthy young standard and plant it in the box, using as compost good fibrous loam and well-rotted manure, about two parts of the former to one of the latter, and a little bone-flour. Make the soil very firm about its roots. Syringe the tree now and then, but do not give much water—just enough to keep the soil moist. The temperature of the house should be kept down as low as possible, providing frost does not enter. This treatment should be maintained until about January, when you may prune the tree, and then afford a little artificial heat so that the temperature is about 50° by day. The growths should be cut back to within 6 inches of their base the first season, as the object should be to obtain nice long rods the first summer which would blossom well the following spring. While this standard is developing you might try another pot

plant, keeping the plant in the pot and tying the long growths up to the roof. It should give you some nice flowering the first season if a really good healthy plant is secured.

HYBRIDISING ROSES (Underhills).—This is rather an exhaustive subject, and one that would take up more space than we can afford. You will find a good account of the *modus operandi* in "Rose Growing Made Easy," published at the offices of *Country Life*, Limited, and by George Newnes, Limited. Regarding perfume in the Rose, raisers are striving to hybridise with the object in view of producing fragrant Roses; but, unfortunately, some of the most lovely productions are scentless, whereas many that are fragrant are often minus the good points that we look for in a Rose. We certainly think that fragrance should be demanded in our novelties, or, at least, no novelty, unless it possesses very special merits, should be recognised, unless it be fragrant. In the early history of the Hybrid Tea Rose, varieties were employed for seed production that produced seed freely. One of these was Lady Mary Fitzwilliam, and quite a number of present-day Roses could be traced to this Rose directly or indirectly. Now the want of fragrance on the part of Lady M. Fitzwilliam has, undoubtedly, influenced its offspring. We believe that if raisers would take as seed and pollen parents those kinds that are fragrant, we should soon have a number of fragrant novelties, especially when the Hybrid Perpetual is employed as one of the parents.

THE GREENHOUSE.

CAMELLIA BUDS DROPPING (C. T.).—It is difficult to advise you what to do with your Camellia tree which drops its buds, as other trees growing under exactly similar conditions flower satisfactorily. It may be that the variety in question is naturally a difficult one to flower satisfactorily, and it would probably be better to waste no more time with it, but to dispose of it and start again with a well-tried variety.

STANDARD FUCHSIAS AND MARGUERITES (C. J.).—Both the Fuchsias and Marguerites must be shifted on when necessary, and have every side shoot removed till the required height is obtained. Each plant should be tied to an upright stick. When tall enough, the points of the shoots must be pinched out, in order to induce the formation of side branches. Care must be taken that these branches are well secured, otherwise they may split off. You could not depend upon keeping the Marguerites in a cold shed for the winter.

ARUM LEAVES AND DARK SPOTS (J. D. M.).—The Arum leaves are attacked by the fungus *Hornodendron didymosporoides*, which is causing the brown spotting of the foliage. The plants are probably being kept in too moist an atmosphere, for this fungus is usually most prevalent and attacks a considerable number of plants under moist conditions. Attention to this detail, growing in not too rich a soil, and spraying now and then with a solution of potassium sulphide, 1oz. to three gallons of water, will, no doubt, keep the pest in check.

BORONIA NOT DOING WELL (M. C. S.).—The Boronia is very apt to get straggly, with comparatively few blossoms, unless it is cut back annually. We should advise you to at once cut yours back into a shapely bush, when it will make new growth. Directly the young shoots are about half an inch in length, the plant should be repotted, using a pot one or two sizes larger than it was in before. A suitable compost is peat and sand. In potting, this must be pressed down very firmly. After this keep the plant in the greenhouse till early in June, when it may be placed out of doors, taking great care that at no time it suffers from want of water. If, in fact, of course, be taken under cover in autumn, before the nights grow cold.

MIMOSA NOT DOING WELL (M. H. W.).—You ought not to experience any difficulty in cultivating Mimosa in a greenhouse. Many kinds of *Acacia* (Mimosa) are grown in pots and borders, and, as a rule, they give good results. We can only assume that some local condition is not satisfactory. Perhaps your greenhouse is kept too warm. A maximum temperature of 45° with fire-heat is quite high enough for any of the Australian *Acacias*, to which group your plants belong, while on all favourable occasions they like plenty of fresh air. From the beginning of June to the end of September such plants are benefited by being stood out of doors. The compost in use ought to prove satisfactory. Perhaps your plants are infested with red spider. That would cause the leaves to fall.

SOWING SCHIZANTHUS (T. W.).—You do not say what conveniences you have for growing the seeds named by you, hence we are decidedly handicapped in giving an answer. The Schizanthus is popularly termed the Butterfly Flower, as the colourings of the blossoms suggest the markings on the wings of some butterflies. It is largely used for greenhouse decoration, being sown in early autumn, when the resultant plants will flower in April and May. They grow from 18 inches to 2 feet in height, and flower profusely. If you have a small frame, the seed may be at once sown and placed therein; then plant the seedlings out in the garden when they are sufficiently large; or they may be grown in pots altogether. Three seedlings in pots 5 inches or 6 inches in diameter will be the best. Failing a frame, you can raise your seedlings in a window. The *Nicotiana* is one of the *Tobacco* Plants with showy red flowers. Like the Schizanthus, the seed should be sown now, and the young plants either grown in pots or planted out.

SOWING ORCHID SEED (P. C.).—The raising of hardy Orchids from seed is a subject about which very little is known, and we doubt if you will be successful; but with raising Orchids from seed the unexpected often happens, and you might try the following plan: The best compost consists of sphagnum moss and leaf-mould in equal parts. Both are chopped and rubbed up fine before mixing them

together. A pan or flower-pot should then be filled one-third of its depth with drainage, over which is placed a layer of moss, when it can be filled with soil to within half an inch of the rim. Give a good watering, and after the soil has settled down the seed may be thinly sown at once. Cover the pot with a piece of glass, and place in a cold frame or cool greenhouse, where the soil must never be allowed to become dry. Overhead watering is not recommended, but the pot should be stood in water (about half its own depth) directly the soil begins to show signs of dryness and allowed to remain till moisture has reached the surface. If you are fortunate enough to raise seedlings they will also require similar treatment in a young state.

FRUIT GARDEN.

BULLFINCHES AND FRUIT TREES (F. B. J.).—The only way to get rid of the birds is to net the trees with prepared herring-netting. This is to be bought very cheaply, and with care would last many years. If the mischief has not already been done, the netting should be applied without delay.

FUMIGATING A PEACH-HOUSE (Hampshire R.).—The Peach is extremely sensitive when in leaf to strong insecticides, even nicotine, and at the stage yours are, hydrocyanic acid gas would be almost sure to destroy the crop and cripple the trees. Water at about 90°, strengthened with quassa extract, a 2-inch potful to four gallons, will destroy red spider, but the application must be repeated till all are destroyed, and probably the mite will reappear throughout the season. See that the trees are sufficiently moist at the root.

TO DISTINGUISH BETWEEN CODLIN, PIPPIN AND PEARMAIN (C. E.).—The shape of the Apple determines if it is a Codlin, Pearmain or Pippin. A Codlin is usually a large fruit, broad at the base, tapering more or less regularly to the eye, as, for example, Lord Suffield and Keswick Codlin. A Pearmain is usually also broad and of handsome form, such as Worcester Pearmain and Adam's Pearmain as examples. A Pippin is always round, some deep round like King of the Pippins, and others flat round like Fearn's Pippin. The above indicates the type, but all vary a little.

SILVER-LEAF ATTACKING APRICOT TREE (U. C.).—This disease attacks all sorts of stone-fruit trees and some other kinds as well, and is due to the fungus *Stereum purpureum*, which lives in the stem and branches producing no fruit until the branch dies, as it will after a year or two. Attacked branches produce very little fruit, if any, and should be cut out below the point of attack as soon as they are observed. The disease starts at a wound, and the part of the stem attacked may be known by the presence of a brown stain in the wood. The pruning should be done below the lower limit of that stain. The spores of the fungus gain entry by a wound, and all wounds which are exposed render the entry of the fungus more easy. Wounds should be painted over with lead paint, or with Stockholm tar. If the whole of a tree is affected, it is best to root it out, for recovery is rare and a method of cure unknown.

MISCELLANEOUS.

RED MITES ON PEAR TREE (H. W. M.).—The large, bright red velvet mites sent are in no way harmful to vegetation. They are known as species of *Trombidium*, and need cause no alarm in the garden so far as plants are concerned.

GUINEA-PIGS AND THE LAWN (A. P.).—It is true that guinea-pigs kept on a lawn eat a good deal of grass and keep it down very short in places; but, unfortunately, it is not possible to get them to eat the grass evenly over the whole surface, neither do they regulate their appetites according to the rate of growth of the grass; therefore their value for the purpose is more theoretical than real. You would do better to mow your lawn with bone-meal at present, and with well-rotted manure, or really good soil, next autumn and keep it mown short throughout the summer with a lawn-mower.

HEATING GREENHOUSE BY MEANS OF ELECTRIC RADIATORS (H. F. B.).—So far as we are aware, electric radiators have not been applied to greenhouse heating, or, at any rate, not to any extent. The advantages appear to be mainly in the direction of economy of labour and time—there would be no stoking to do, and probably with a sufficient supply of radiators and electric thermo regulators the temperature of a house could be kept very regular indeed. It is doubtful, however, whether the heating would at present be economical; nor with the ordinary radiators would it be likely to be satisfactory. We are inclined to think the heat would not be likely to be well distributed with the ordinary form of radiator, and it would also have the disadvantage of being dry. Special radiators and a special means of keeping a sufficient supply of moisture in the atmosphere would therefore be necessary.

LARVÆ TO NAME (E. M.).—The grubs sent are those of the Vine weevil (*Otiorhynchus*). These weevils are very destructive to the roots of plants in pots, especially Ferns, Cypermen, Begonias and the like. The beetles to which they eventually give rise, and which appear in April, May and onwards, feed during the night on the leaves of plants, and may be caught by spreading something beneath the plants attacked and suddenly showing a light or jarring the attacked plants. The roots may be freed from the grubs by turning them out of their pots and picking out the grubs, or the following mixture, recommended by Mr. Theobald, may be tried: Water the plants with a mixture made by dissolving one quart of soft soap in one gallon of boiling soft water, to which add one pint of crude carbolic acid. Mix the whole by means of a force-pump into an emulsion. For use, add thirty times the amount of water to each part of the emulsion. The earth should be removed from the roots before watering.

NAMES OF PLANTS.—*H. N.*—A. *Aracaria imbricata*; B. and N. *Taxus baccata* varieties; C. *Cephalotaxus fastigiata* var. *pedunculata*; D. *Fatsia japonica*; E. *Taxus baccata*; F. *Aucuba japonica*; G. and O. *Cupressus lawsoniana* varieties; H. *Berberis Fortunei*; J. *Eucynimus japonicus*; K. *Laurus nobilis* (Sweet Bay); L. *Ilex glauca* var. *balcanica*; M. *Buxus sempervirens pendula*.—*Amateur, Whittlesey*.—1. *Ribes aureum*; 2. *Prunus Padus*; 3. *Exochorda grandiflora*.—*H. D., Blondford*.—*Prunus nana*, Natural Order Rosaceae. — *L. A., Romsey*.—*Brodiaea uniflora*.

SOCIETIES.

PARKSTONE GARDENERS' ASSOCIATION.

A LECTURE on "Twentieth Century Gardening" was given by Mr. G. Garner on April 11 before a good attendance of members—about fifty—of this association. Dr. Crallan, the president, occupied the chair. The lecturer referred to the great advance made in gardening during the past few years, drawing attention to the improvements made in the system of bedding-out plants, the getting away from formality, the use of herbaceous and alpine plants, the increased perfection of the Sweet Pea, tuberous Begonia, Carnation, and the extended use of hardy and half-hardy annuals. He also drew attention to the increased love of gardening as shown by amateurs, to healthy competition at exhibitions, to the eagerness of the gardening public for instruction, and to the generous supplying of the needful instruction by the gardening journals at the present time. He also paid a warm tribute to the work done by mutual improvement associations. A free discussion followed, the president leading. He said that quality of produce was being recognised now more than ever, and gave much praise to the horticultural Press, for its work was a valuable one, and where there were sketches given of a practical nature as well as text, the reader could not fail to reap considerable advantage and gain much very useful information in a short space of time. Mr. King and other members referred to the current use of chemical manures, and Messrs. Hill, Read, Palmer and Alexander took a prominent part in the discussion. Cordial votes of thanks to the president and the lecturer brought to a close a very pleasant evening.

BRECON DAFFODIL AND SPRING FLOWER SOCIETY.

FROM small beginnings this society's exhibitions have grown in interest and importance every year, and the fifth annual show, held at Brecon on April 10, proved an advance in every way on former exhibitions. The committee had wisely altered the date from the 23rd inst. to meet the circumstances of the abnormally early season. In spite of this, most of the flowers in the Daffodil classes looked very tired. There was, however, a record number of entries and keen competition. The principal prize-winners were Lady Salter, Miss A. de Winton (the energetic secretary of the society), Lord Glauk (president), Dr. Lower and Sir John Llewelyn. The classes for alpine flowers and flowering shrubs were well filled with flowers of good quality. The most interesting Daffodil class was one for thirty distinct varieties, and Dr. Lower's exhibit, which won the first prize—a silver flower-vase given by Messrs. Barr and Sons—was quite the feature of the show. His flowers were beautifully fresh and clean, and included well-grown specimens of Bernardino, Cossack, Harold Finn and King Alfred. Sir John Llewelyn, who obtained the second place, showed many beautiful varieties, such as Buttercup, Pilgrim and Isis; but his exhibit was especially remarkable for several fine seedlings of his own raising. His Barbara, a large but very refined white trumpet variety, perhaps the finest flower in the show, was given a special award of merit. Emma, another of his seedlings, is a fine large yellow Ajax, with smooth, ample perianth and long, well-shaped trumpet.

The society's gold medal was awarded to Messrs. Barr and Sons for an interesting group of Daffodils, which included, among many very fine new and older varieties, Sheba (a flower of striking colour), Dossoris, Venus, Red Beacon, Lord Kitchener, Mounach and some beautiful seedlings.

Messrs. Cartwright and Goodwin were awarded a silver medal for a well-arranged group of Daffodils shown in a very fresh condition. Iuga, Long Tom and Matthew Arnold were the outstanding features of this exhibit.

From Lis-sadell, Sligo, came a group of Daffodils remarkable for their huge size. Varieties like Whitefell, Bernardino and Great Warley, to mention three only, were almost unrecognisable in this season of somewhat undersized flowers, on account of their gigantic proportions. This group also included some wonderful seedlings.

Following the excellent custom of this society, a lecture was given during the afternoon, the lecturer on this occasion being Sir John Llewelyn, whose reputation in horticultural circles was sufficient guarantee of an interesting treatment of his subject—"Some Flowers at the Show." Referring to the alpine flowers, Sir John explained the natural conditions under which these grow and showed how comparatively easy they are to cultivate when their natural conditions are imitated as far as possible. He advocated early lifting and planting as essential for the successful cultivation of Daffodils, and recommended all would-be prizewinners to study on this subject "The Book of the Daffodil," by the late Rev. S. B. Bourne; "Daffodils," by the Rev. J. Jacob (in the Present Day Gardening Series); and "The Latest Hot by," a little pamphlet issued by Messrs. Cartwright and Goodwin.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Whitethorn Flowering Early.—During last week reports reached us from many of the Southern Counties that the Whitethorn or May-blossom (*Crataegus Oxyacantha*) was flowering freely. We also noticed this in many parts of Surrey and Essex as early as the 23rd ult., and in districts where it does not usually occur until the second week in May.

The International Exhibition.—The Chelsea Hospital grounds, where the great International Horticultural Show is to be held from the 22nd to the 30th inst. inclusive, already present a very busy aspect. There is quite a forest of huge tent poles, and some of the rock gardens are in the making. We understand that an official catalogue is to be published, and the sooner this is done, the better for the success of the exhibition.

Rose Conference and Dinner.—The Rose conference arranged by the National Rose Society will be held at the Holborn Restaurant, London, on Monday, May 20, at 5 p.m., when the president will deliver an address on "The Modern Development of the Rose," which will be followed by a discussion by the members present. There will be no charge for admission. The Rose conference will be followed at 7 p.m. by a dinner, which will also be held at the Holborn Restaurant. To this dinner some of the leading foreign rosarians have been invited as guests of the society. The charge for the dinner will be five shillings, exclusive of wine and coffee. Further particulars respecting both the Rose conference and the dinner will shortly be sent to the members.

An Interesting Gooseberry.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. W. G. Smith of Dunstable sent drawings illustrating flowers and fruit of a racemose form of Gooseberry, which had been referred to previously as a hybrid between the Gooseberry and the Black Currant on account of the thickly-produced clusters of very dark berries and their flavour, which was said to be intermediate between the Gooseberry and Black Currant. On careful examination of the flowers and fruit he had, however, been unable to find any trace of Black Currant. The plant appeared to be wholly Gooseberry, with flowers and fruit borne in racemes of from two to five. He could detect no Black Currant flavour, although the taste was delicious and strong. No oil glands are present on any part of this new form, and the fruits are perfectly glabrous. The pollen is exactly that of the garden Gooseberry. It flowers three weeks in advance of the Black Currant. The merit of the plant lies in its great fruit-producing properties, as on a given length of branch it produces more fruit in weight than

probably any other bush extant. The colour of the fruit when ripe is deep, almost black, maroon or dark mahogany, becoming black. The plant originated as a seedling in a market-grower's garden in the South of England, where it was regarded as a variety more curious than useful. Mr. R. H. Nicholls of Dunstable has acquired the stock.

Anemone apennina.—Conspicuous among the many dwarf-growing plants recently in flower at Kew, this European Anemone might be seen in many places used with effect for carpeting beds of shrubs, the pretty blue flowers forming a striking contrast to various coloured blossoms above. Being so easily obtained and adapting itself so well to this method of culture, it is a wonder that it is not more widely grown for the purpose, while it is equally effective when introduced as an undergrowth to thin woods and plantations. Taken up after the death of the leaves and divided into small sections, it is possible to raise a considerable stock in two or three years from a few original plants, though for anyone who wishes to obtain a quick effect it is possible to purchase roots at a small cost in autumn.

A Good Dwarf Flowering Shrub.—As its cultural requirements and stature are about on a par with many of the hardy Heaths, *Kalmia glauca* is a very suitable subject for associating with them. It forms a neat little shrub from 18 inches to 2 feet in height, clothed with small, narrow leaves revolute at the edges and glaucous beneath. The flowers, which are freely borne in terminal clusters, are of a bright rosy red colour, a very effective tint. Where grown in a mass and associated with the different Heaths, this supplies a tone of colour quite distinct from its many associates. It is the first of the *Kalmias* to unfold its blossoms. It must be borne in mind that, in common with most ericaceous plants, the presence of lime in the soil is very inimical to its welfare. A peaty compost such as that in which so many of its allies thrive will suit it well.

An Interesting Willow.—The principal interest attached to *Salix sesquiteria* lies in its inflorescences, for instead of bearing normal catkins of male and female flowers on different bushes, as is usual in the Willow family, male and female flowers occur in this case, not only on the same plant, but on the same catkin. The female flowers occupy the lower part of the catkin, and the male flowers the upper part. Described as a hybrid containing blood of three species—*S. purpurea*, *S. aurita* and *S. phylicifolia*—the abnormal condition of the flowers may be due to this combination, for a few other instances have been recorded of Willow plants bearing male and female inflorescences, which have been reported to be of hybrid origin. *S. sesquiteria* has little besides its flowers to commend it to general notice, for it is of no special decorative merit.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Schizostylis coccinea not Flowering.—With regard to *Schizostylis coccinea* not flowering (see THE GARDEN, April 6, page 176), I thought it might be of use to your correspondent "C. G." to know that we have discovered that, by constantly dividing the clumps and planting the little bulbs as far as possible separately, we now have quantities of very fine large flowers in the autumn.—E. H. S., *Belfast*.

Saxifraga Fergusonii.—I am not quite sure that those who ascribe the origin of *Saxifraga Fergusonii* to *S. Rhei* are correct. The flowers are much smaller, much deeper in colour, and the foliage is considerably smaller and more compact in its arrangement than that of the real *S. Rhei*. In this respect the plant comes closer to the old *S. muscoides purpurea* or *atropurpurea*, on whose possession we used to pride ourselves long ago, when it was the only red "Mossy" obtainable. However this may be, *S. Fergusonii* is a charming little plant, with fine crimson flowers appearing ten days or so before Guildford Seedling or Miss Stormonth, both of which are of much the same style. It is a delightful little plant for the half-shaded slopes of the rock garden or the rockwork edging.—S. A.

Iberis Little Gem.—Last year in my garden, situated on a sharp slope in the south-west district of London, many subjects suffered terribly from heat and drought, even though they were watered whenever possible. This tiny Candytuft, however, went through the season without turning a leaf, and it is now a really delightful object, being quite a mass of its little rounded heads of white blossoms. As it is of a neat and compact habit, it may be planted on the rockwork without any danger of encroaching on more delicate neighbours, or it can be, as in my case, assigned a place in the forefront of the herbaceous border. Its origin I do not know, but it appears to be related to *Iberis garreuxiana*. At all events, it is a charming little member of a genus that contains so many delightful free-flowering kinds.—H. P.

A Beautiful and Distinct Clerodendron.—The genus *Clerodendron* is an extensive one, representatives being found in various parts of the globe, though most of them are natives of the Old World. In their several characters they are also very distinct, for of the hardy kinds *Clerodendron foetidum* or *Bungei* is almost herbaceous, while *C. trichotomum* is, under favourable conditions, quite a tree. Of the tender kinds (and there are a hundred or so of them) the difference is just as marked, some being much appreciated as free-growing climbers, while others are of a decidedly bushy habit. There is nothing of the climbing nature about *C. myrmecophilum*, as it forms a sturdy-growing, upright-habited plant, clothed with rather long lanceolate leaves. It will flower freely when from 18 inches to 2 feet in height, of which nearly one-half will be occupied by the flower-panicle. This bears a great number of flowers, disposed in regular whorls. The blooms are well over an inch across, and attract by reason of their uncommon tint, difficult to describe; but perhaps amber, with an orange suffusion, is as near as anything. It was originally sent to Kew by Mr. Ridley of the Botanic Gardens, Singapore, and in April, 1904, Messrs. Sander of St. Albans obtained a first-class certificate for it from the Royal Horticultural

Society. As might be expected, it is essentially a stove plant.—P.

A Beautiful Marsh Marigold.—*Caltha polypetala* has been a wonderful sight during the last few weeks. We have it planted around the edges of lakes and up a long, narrow gorge between forest conifers, together with other aquatics, and this scene is exceedingly picturesque and beautiful. Some of the blooms have measured $3\frac{1}{2}$ inches across, and, as we have hundreds of plants, one can easily imagine the sight. The bright sunshine has suited them well, and in this ravine the water becomes warm, trickling down from the hillsides. The common *C. palustris* has also been exceedingly floriferous and very beautiful. These plants are easily propagated, and can be made use of in many ways for beauty, especially in sunny nooks and out-of-the-way places.—W. A. Cook, *The Gardens, Leonardlee*.

A Coreopsis for the Greenhouse.—Although *Coreopsis Grantii* has been grown at Kew for half-a-dozen years or more, for some reason or other it has not found its way into general cultivation. True, I have met with it in two or three nurseries, but only to be taken up in a half-hearted manner, whereas it well merits extended culture. It is a native of an elevated region in Uganda, and succeeds well in the greenhouse. A bushy plant, reaching a height of 18 inches or thereabouts, this *Coreopsis* is well worth growing for the sake of its pretty bipinnate foliage; but the flowers are also very attractive, being about a couple of inches across, and of a bright yellow. Furthermore, a succession—commencing with the early part of the year—is maintained for a considerable time, an important matter when the greenhouse has to be kept gay with flowers at all seasons. It is certainly a decided break away from most of the flowers that now contribute towards the embellishment of the greenhouse.—W. T.

Exhibition versus Private Garden Flowers.—The more I read present garden literature, the more I am struck by the apparent unfortunate and increasing divergence between "exhibition flowers" and those which the "private public" (if I may use so "Irish" an expression) desire to grow. Surely they should run on parallel lines, to their mutual advantage. Flower shows, I always supposed, were intended to encourage the improvement of garden flowers; but, if so, they now seem to have almost entirely departed from any such purpose. Now one often hears, "Oh, it's no good going to flower shows; they are only for exhibitors and for professional florists' advertisements. They are no use at all for us amateurs." The fact is, we amateurs have found out by dire experience that exhibitors chiefly go in for special "show" sorts, producing a few "show" blooms from among an immense number of plants, so it has come to our shunning exhibition flowers instead of cultivating them, for what amateurs usually want are flowers of artistic form and refined hues which will bloom freely and make a prolonged display in our gardens and conservatories, and be what an old friend of mine once described as "good cut-and-come again flowers" to adorn our houses. A noteworthy example of the divergence was observable in the Rev. J. Jacob's recent remarks (page 191, issue April 20) *re* Daffodils. Much as it grieves one to differ from a writer whose delightful discourses are always of interest, his remarks illustrate exactly the opposing points of view. He delights in an exhibitor's flower, which, to the artistic eye of the amateur, too strongly resembles in

its regularity the milliner's machine-made flowers at something three farthings a dozen. Cannot someone devise a plan whereby we may manage to draw the diverging aims of the exhibitor and amateur together; while not depriving the professional florists of their advertisements, and thus realise the original good intent of flower shows?—AN AMATEUR.

Primula frondosa.—I am much interested in the subject of the best manner to cultivate *Primula frondosa*, which was charmingly illustrated in the photograph in THE GARDEN of April 20, page 194, and on whose cultivation Mr. Malby discourses in his usual pleasant and informative way. It is nicely in flower here, and is one which is always appreciated. It is a dainty little plant, and, so far as my experience goes, one of the most satisfactory of the *Primula* species, save, perhaps, a few of the older ones in our gardens. The question of the best position in which to cultivate it appears to be open to discussion, and Mr. Reginald Farrer, who probably knows as much about the cultivation of these plants as anybody, says that "it dislikes excessive moisture and rots away promptly if annoyed by it. On a well-drained corner of the rockwork, however, I have great fat perennial tufts of it." On the other hand, Mr. Lewis A. Meredith, writing from County Wicklow, says in his "Rock Gardens" that "it likes a half-shady position in moist sandy peat and loam." Then Mr. Malby tells us that with him "it thrives in a fairly moist vegetable soil, with loam, sand and grit added," adding "I generally place about the plants pieces of sandstone half buried in the earth to prevent too rapid evaporation." It will thus be seen that there is an apparent conflict of experience, although this may be largely due to the rainfall and moisture in each district. My own knowledge, extending now over a good many years, is more in accord with that of Mr. Malby and Mr. Meredith than with that of Mr. Farrer. I have at present some young plants in pots which were subjected to rather dry conditions while in a young state, and these have not thriven with the same vigour as others which had more moisture from the beginning. In the open I have grown it for a number of years, and have always found that it thrives better in a moist position, such as that advocated by Mr. Malby and Mr. Meredith. It is doing excellently with me under the same conditions as *P. denticulata*, and close to *P. rosea* and *P. Munroi*, the last two in particular being moisture-lovers. In all dry weather, moist though this low corner is, it receives frequent soakings with pure water. On the other hand, it is well drained. I cultivated it for years in one of my former gardens on the margin of a small Water Lily pool, and in a place where the soil was not only moist, but really wet all the year round, this border being on the cement margin with the water soaking into the border. The only care needed there was attention in winter and spring, as there the plants were lifted by the frost, and if not attended to at once were apt to be destroyed. I have personal knowledge of the plant in its native habitats in Thrace, but there it is said to be a mountain species, though whether it is in moisture or in dry conditions I am not aware. By the way, there is a conflict of statement respecting its colour. Nicholson's "Dictionary of Gardening" says it is blue; Mr. Malby calls it pink; but to me a kind of lavender rose would appear as better describing the tint, evasive as are the colours of flowers.—S. ARNOTT, *Dumfries*.

Crocuses in the Woodland.—The illustration of the woodland scene in spring, page 181, issue April 13, is a charming one, and reminds me of Primroses in the Oak woods of the New Forest, where they grow by the acre, spreading from the woods over the banks, covering the grass by the roadsides and to the very edge of the metal portion of the latter. The Primroses have been growing there for very many years, and Crocuses may be grown more extensively than they are, as shown in the excellent illustration referred to above. The flowers last longer in the partial shade.—B.

Celmisia Seeds for Readers.—When I sent a letter to THE GARDEN some time ago offering seeds of *Ranunculus Lyallii*, I was surprised at the result. I had applications from our own New Zealand, Australia, America, England, Ireland, Scotland, Bavaria, Belgium, Finland and Holland. I have now some seed of *Celmisia coriacea*, which is almost as beautiful as the *Ranunculus* and much easier to grow, and I offer that to your readers. I do not sell it, not requiring the money, but I should be glad to have in exchange some rare seed or bulb. I have also seeds of other beautiful flowers. I hope to send a photograph of the *Celmisia* when I can get it.—(Mrs.) E. T. IZARD, *Whanaka, Christchurch, New Zealand.*

Fruit Trees for Garden Effect.

This subject was recently raised to me by an amateur as we stood in view of a fine standard Pear tree. Every twig was loaded with blossoms, the whole having a very fine effect. The question was asked, "Why not plant fruit trees for this purpose in addition to planting for fruit?" One was inclined to echo the question, "Why not?" for surely the thought that it is *only* a fruit tree should not prevent us from admiring its beauty when in flower. The two double cordons illustrated on this page are of the variety *Mme. Treyve*, which is certainly one of the most showy of Pears when in bloom. The espalier on page 216 is *Emile d'Heyst*, a variety which commonly follows a profusion of flowers with a heavy crop of fruit; in fact, it is not yet sufficiently valued in gardens. Incidentally, the trees serve as illustrations of the good results of reasonably rapid extension of main branches, the desired balance between root and stem thus being promoted in a most satisfactory way.—C. WAKELY, *Chelmsford*. [The trees illustrated are growing in the Essex County School Gardens at Chelmsford, where Mr. Wakely has got together a very fine collection of fruit trees of all kinds, the whole of which are in splendid condition.—ED.]

FORTHCOMING EVENTS.

May 7.—Scottish Horticultural Association's Meeting.

May 8.—East Anglian Horticultural Club's Meeting. The subject for discussion will be "The Preparation and Application of Natural Manures."

THE ROSE GARDEN.

SOME NEW ROSES AS SEEN UNDER GLASS.

ALTHOUGH new Roses are produced annually to an alarming extent, there is always a sort of expectancy from the Rose-loving public that something really tip-top may be introduced. The marvellous diversity in this wonderful flower warrants us in expecting really remarkable novelties, and I feel sure we have yet in store some really great surprises, even rivalling *Lyon Rose* and *Rayon d'Or*. Now, it is not always wise to judge new Roses as seen



TWO DOUBLE CORDON PEAR TREES IN BLOOM. THE VARIETY IS *MME. TREYVE*.

under glass, but we may form a fairly accurate opinion of their merits. I must admit I was much disappointed with

Mrs. Joseph Welch last summer, for its blooms on shot-out buds came almost single, although with huge petals. But now I have before me a glorious flower, of remarkable depth of petal and of a lovely rich brilliant rose pink. In the bud it is quite unique in form, few Roses being of such a beautiful elongated shape, and I should say it will be a fine commercial flower for this very reason. My plants have been grown somewhat cool, so that for the cool greenhouse it is to be recommended, and no one would do wrong to have quite a large

number of it planted out. Another of Messrs. S. McGredy and Son's novelties that has been very fine is

Evelyn Dautesey, a glorious Hybrid Tea of *Pharisaer* type, with the lovely colouring of *La France* and *Mrs. W. J. Grant* blended; in fact, it opens with quite a reddish carmine shade, not unlike *Laurent Carle*.

Mrs. Amy Hammond is yet another from *Portadown*, and one of very great charm, the blending of amber, apricot and flesh pink being very lovely. This, combined with the shapely buds, will make it, as the raisers say, "everybody's Rose." The purity of the white blooms of

Mrs. Herbert Stevens is quite dazzling when grown under glass. It is like a pointed *L'Innocence*, without the latter's very delicate petal. If I mistake not,

Mabel Drew will prove one of Messrs. Alex. Dickson and Sons' best introductions. For greenhouse work it is splendid, the exquisitely shaped, solid blooms being produced in wondrous perfection. Although termed a Hybrid Tea, it comes very near the true Teas, almost, if not quite, as much so as *Mrs. Foley Hobbs* and *Mrs. Myles Kennedy*.

Mrs. Fred Straker has been delightful. I think of all new Roses of the orange crimson colours this is one of the loveliest, and its form is exquisitely beautiful. The long buds have the petals so beautifully arranged at the point that this alone gives to the Rose a rare distinction. This variety cannot fail to become very popular.

F. R. Patzer.—This Hybrid Tea has been so very fine and its blooms so large that it astonishes me this Rose has not received a gold medal. I really think the gold medal should be retrospective, so that when a variety proves, as this has done, that it richly merits the award, the authorities should have power to award it. The form and substance of this Rose are all that can be desired, the outer petals being exquisitely pointed. It reminds me somewhat of a *Mme. Abel Chatenay* in form, except that it possesses a fine high centre, and is very substantial also. The colouring in the centre is like a very clear *Catherine Mermet*, but the outer petals have an orange pink shade. In a cool

house, blooms will last fully a week, and even more when fully out. I have some flowers at the time of writing that were good ten days ago. I heartily congratulate Messrs. Alex. Dickson and Sons upon raising this fine novelty. Whatever we may say of

Lady Hillingdon outdoors, there is no gainsaying its value as a forced flower. If it were a little stiffer in the stalk, it would be a perfect golden Rose, and even as it is, with its fault of a somewhat weak flower-stalk, it stands unrivalled at present. How long it will remain so when *Sunburst* is grown as largely remains to be seen. A most delightful colour is

Andre Gamon, a Hybrid Tea of a shade not as yet at all plentiful, and one that may be described as cochineal rose. It is a beautifully-formed flower also, and is a worthy introduction of the Lyons wizard, M. Pernet-Ducher. Although I have not grown it as yet under glass, I have a fine account of the Yellow Druschki from Australia. I suppose the Rose that is meant by this appellation is

Natalie Bottner. Mr. Arthur Moore of Hunter's Hill, New South Wales, describes the variety in the "Journal of Horticulture of Australasia" as a stupendous Rose. The colour of the flower, he says, was like a good Hugo Roller, and the shape, if anything, an improvement on Frau Karl Druschki. The free-flowering nature of the variety may be judged when it is stated that three plants (maidens) carried no fewer than forty-three buds. I am trying the variety outdoors, and I hope to be able to report upon its behaviour later on.

Mrs. George Shawyer is well holding its own this year, and bids fair to become one of our leading deep pink varieties for forcing. Nothing can surpass the glorious elongated blooms, perhaps

Roses always command admiration, much more so than flat Roses, although the latter may be very artistic in the arrangement of the petals, and when we have real brightness of colouring, as in Mrs. G. W. Kershaw, they are doubly valuable. I should say market-growers would find this Rose a great favourite, especially for field culture. It was introduced by Messrs. A. Dickson and Sons in 1906. W. E.

WORK AMONG THE CHRYSANTHEMUMS.

IN this month there is a great deal of very important work to be done. The final selection of the plants for the last potting must be carried out now, so that those retained will have more room in which to grow. The wise cultivator will see to it that his plants are given sufficient room, so that the stems may be strong near the base and not drawn and spindly. If spindly, the sap-vessels are contracted, and later on, when it is necessary to feed the plants, the latter cannot

with a flat surface. On the latter sprinkle the coarse sand, then the bone-meal. Follow with the leaf-soil, artificial manure, wood-ashes and soot respectively. All should be laid on evenly; then commence at one end and turn over the whole mass, still retaining the same form of the heap. Once more turn over the heap, and do not afterwards throw the compost into a pointed heap, but use it as mixed from the floor; then the fine and the lumpy portions will be available in proper quantities for each plant as the work of potting proceeds. Some varieties are less robust than others, and do not make roots as freely; these require more of the lighter parts of the soil, such as leaf-soil and sand. The proportions for an ordinary compost should be as follows: Fibrous loam, two parts; leaf-soil, one part; rotted manure and sand, one part. To each barrow-load of the above combined parts add a 5-inch potful of bone-meal and a similar quantity of soot. The concentrated manures must be used according to the instructions given with them.

The Pots and the Crocks.—Both pots and crocks must be washed and dried before they are used. The insides of the pots should be very clean. Ten-inch pots are suitable for the strong-growing varieties, such as Mrs. Luxford. Two plants of a weaker-growing variety may be placed in a pot of this size, or one in an 8½-inch pot. Two strong-growing plants, if grown in a single pot, would require a 12-inch one.

Potting.—The soil must be made firmer for plants of the incurved section than for those of the average Japanese, and the weakest-growing varieties must not have the soil pressed as firmly around their roots. Place a good crock over the hole in the pot, then a few smaller ones. On the crocks lay some of the rough turfy lumps from the compost and a few half-decayed Oak or Beech leaves, sprinkling on them a teaspoonful of soot. Finally, leave nearly two inches of space at the top for a future top-dressing and for general watering and feeding. When potted, place the plants in rows, the pots almost touching one another, on boards or ashes. They may remain in this position for a fortnight. Do not overwater, and on fine mornings syringe the foliage with tepid water.

Varieties to Stop Early in May.—They are to be grown on, after being stopped, to produce first-crown buds in August. Mr. H. Thornton, Captain Mitford, Hon. Mrs. Lopes, Edith Jameson, Mme. Rivol, Mme. Radaelli, Bessie Godfrey, Duchess of Sutherland, Mrs. C. Penford and Master David.

To Stop During the Latter Part of May.—Frank Payne, Mrs. W. Iggulden, W. Gee, F. S. Vallis, Reginald Vallis, James Lock, Lady Talbot, Walter Jinks, Miss A. Nicolls, Rose Pockett and Purity. The stopping must be done if the natural break has not occurred.

Border Varieties.—Gradually harden the young plants and put them out in deeply-dug, well-enriched soil, surface-mulching at the end of the month. **AVON.**



AN ESPALIER TREE OF PEAR EMILE D'HEYST IN FULL BLOOM. (See page 215.)

one of the best from this standpoint that we have at present.

There are several other varieties I propose to note, but must defer this to another article. P.

ROSE MRS. G. W. KERSHAW.

THERE is one grand quality about the novelties from Newtownards, and that is that they improve upon acquaintance. This is not the case with a great many new Roses. They are seen, perhaps in superb form, when grown as pot specimens; but when brought under ordinary cultivation they do not come up to our expectations. The beautiful Hybrid Tea named above is really a grand Rose with me, far superior to Joseph Lowe, a Rose it resembles to some extent, except that it has the glorious deep bloom of a Pharisaer with Joseph Lowe colouring. These deep-petalled

receive the benefit they would if the sap-vessels were large.

Mixing the Compost.—Usually, the main batch of plants is potted from the middle of May to the end of the month. In June many plants are also potted, and it is advisable to mix the compost for all at the same time, namely, early in May, if this work has not been done already. The ingredients should be well mixed together, so that all plants may have an equal share. Some cultivators make a conical-shaped heap; this is a wrong way, because the lumps roll to the base, and, furthermore, it is impossible to know for sure whether the small parts, such as sand, wood-ashes, bone-meal and artificial manures, have been evenly distributed. First spread out the fibrous loam on the ground or floor of a cool, open shed. The loam should be 1 foot deep,

THE ROCK AND WATER GARDEN.

CONCERNING THE HARDY WATER LILIES.

(Continued from page 208.)

Some Peculiarities of Water Lilies.—In their growth there is quite a distinctive feature in the rhizome (I think this term may be applied) of the *N. odorata* section to that of the *N. Marliacea* group. In the former instance it appears to be quite hard and solid as contrasted with the latter, and it never swells away into such thick, fleshy stems. I once had a plant of *N. Laydekeri rosea* that for many years never made an offset at all, but continued to extend from the growing end only, until at last, through an injury by being eaten at the growing end, it decayed away and was ultimately lost—not, however, before we secured a seedling from it, which is now thriving well; but it has the distinctive features and flowers identical with those of its parent. In this instance the seedling came into existence close to the margin of our pond in shallow water; this feature I have before noticed in other collections. The seed is probably wafted into the shallows and there it remains. It is very well known that Water Lilies close quite early in the afternoon during fine, bright, sunny weather, but that they remain open longer when it is dull and sometimes showery. In September, however, the new race of hybrids remain open much longer in the afternoon. I have noted them still open during the clear moonlight evenings that we often have during that month. A few years back there was a tendency on the part of some of the hybrids to produce a multiplicity of small growths and relatively small foliage. In this state many did not flower at all, and not a few ultimately died in consequence. The only remedy that I found was to carefully sub-divide, and in that way try to secure normal growth again.

Some of the Best Varieties to Grow.—There is now a wide range of choice, both in point of habit, in growth, and also in that of colour. Selections may be made for deep water and for shallow pools, as well as for fountains and for tubs. For deep water, or comparatively so, say, 4 feet up to 6 feet, I recommend the following: White—*N. Marliacea albida*, *N. virginialis* (new and fine), *N. gladstoneana*, and *N. candidissima*, which I believe to be the same as *N. alba plenissima*; pink—*N. Colossea* (magnificent), *N. Marliacea rosea*, *N. Marliacea carnea*, and *N. Mrs. Richmond* (new and very fine). These are all effective varieties. Yellow—*N. Marliacea chromatella* and *N. mooreana*, which is of a deeper shade; carmine, crimson and deep red—*N. atropurpurea* (the finest deep crimson), *N. gloriosa*, *N. ellisiana*, *N. lucida* and *N. Marliacea rubropunctata*. Until the growth becomes robust, these should all be kept in shallow water.

For water from 2 feet up to 4 feet, or thereabouts: White—*N. caroliniana nivea*, *N. odorata maxima* and *N. candida*; pink—*N. Laydekeri rosea*, *N. caroliniana rosea* and *N. somptuosa* (new); yellow—*N. odorata sulphurea grandiflora*; carmine, crimson and deep red—*N. Escarboncle* (new and fine), *N. James Brydon*, *N. Robinsonii* and *N. Vésuve*. For shallow water and for fountains: White—*N. odorata pumila* (syn. minor); pink—*N. odorata exquisita*; yellow—*N. pygmæa helvola*; red—*N. Marliacea ignea* and *N. sanguinea*.

JAMES HUDSON, V.M.H.

THE FLOWER GARDEN.

SOME RARE HARDY PRIMULAS.

Primula Allionii.—This rare and interesting little *Primula* is indigenous to the region of the Maritime Alps between Cuneo and Nice. The peculiarity of this plant is the strangely sunless places it chooses for its habitat, for under natural conditions it is found in cracks and crevices of hard limestone cliffs, from which the direct rays of the sun are shut off by some obstacle. Moreover, it grows in shallow caves where no rain falls on it, and which are practically sunless. In this case the roots must get their moisture from the

attempt to grow the plant in Scotland in the open air must remember that protection from rain and surface moisture are absolutely essential to the fulfilment of their object.

The difficulties attending cultivation are minimised in the case of pot plants grown in a cold frame, for under these circumstances it is quite easy to grow and bring to a high standard of excellence if proper potting material is used. In proof of the above observations I can at the time of writing (April 8) show several fine plants in full flower, the colours of which range as previously stated. Probably it may be grown in a moraine, but as to this I can give no details, having had no experience of such method of culture in



PRIMULA VENZOI IN DR. MACWATT'S GARDEN AT DUNS.

porous substance of the rock. Apart from this, it can be grown in situations exposed to the sun; but this is contrary to its normal course. It is a plant of very small habit. The elongated rhizome has adherent to it the dead leaves produced in former years. The leaves are rounded or oblong or oblong-concave, thick, soft green in colour, somewhat oily, very sticky, thickly covered with colourless glands. The margin may be entire or somewhat dentate. The flower-scape is so short as to be barely perceptible, being only 1 millimètre long. It bears an umbel consisting of from four to seven flowers of very large size considering the dimensions of the plant, and of a varying tone of colour. The variation ranges from deep rose pink with a white eye to a faint flesh colour.

The mode of inflorescence is somewhat unique, the large flowers, which come out in succession one or two at a time, lying flat in a cushion of leaves. It is certainly difficult to grow in the open, but if its natural conditions are imitated, the task can be made easier. It is imperative to plant it in soil adapted to its nature. The most suitable places are an expanse of gritty, calcareous loam, or a crevice in the rockery in a large piece of soft tufa in a perpendicular position beneath an overhanging piece of rock, so as to protect it from direct sun and rain. Bearing these precautions in mind, there is no reason why success should not be attained. Gardeners who

connection with this particular plant. Cuttings root easily, so there should be no difficulty in raising a stock if desired.

P. tyrolensis resembles *P. Allionii* in all essential particulars, but there are various points of divergence which serve to distinguish them. Its name furnishes a clue to its place of origin, restricted as it is to the Dolomite Alps of the South Tyrol. Even in this region it is only found on rocks and on stony expanses. The plant is seen at its best when it commands an open situation in soil of a loamy nature, with the addition of a little peat and sand. The first point which strikes the observer when making a comparison between this *Primula* and *P. Allionii* is the difference of geographical distribution. *P. Allionii* is limited to a very small district of the Maritime Alps, and *P. tyrolensis* is only to be found in an equally limited district of the Austrian Tyrol, for the rocks and stony expanses of the Dolomite Alps seem to suit it. Moreover, even in this confined area it does not grow abundantly, except at a height of 1,000 mètres to 2,300 mètres. The leaves of the two *Primulas* show few points of contrast, the most striking differences to my eye being the more vivid green of *tyrolensis*, also the leaves of the latter on being pressed emit a peculiar odour not perceptible in the case of *Allionii*. As to inflorescence, while the umbel of *P. Allionii* can bear as many as seven flowers, *P. tyrolensis* has one, or at most two. Personally, I find no

difficulty in cultivating this plant, for, unlike *P. Allionii*, it does not resent exposure to sun and rain.

P. tyrolensis lends itself readily to cross-fertilisation. It has formed hybrids with *Auricula wulfeniana* and with *minima*. With the latter it has produced the pretty little *Juribella*, bearing fine lilac rose flowers, and with *wulfeniana* the beautiful hybrid *Venzoi*, otherwise called *venzoides*, *cridalensis*, *adulteriana*, *micrantha* and *Valmenona*. It is larger in every way than *tyrolensis*, but smaller than *wulfeniana*, and generally bears one to three large lilac-coloured flowers. *P. Venzoi* grows freely and flowers well, and is decidedly worth growing as a rock garden plant. The illustration of *P. Venzoi* is from a photograph taken by Miss Amy Cameron, Trinity, Duns.

Moreland, Duns.

JOHN MACWATT.

SEASONABLE NOTES ON AURICULAS.

Plants in Bloom.—The end of April and the beginning of May is, generally speaking, the time

demands more careful handling than the *Auricula* when it is in flower if its purity is to be maintained.

Plants After Flowering.—Immediately the beauty of the flowers is over, the head should be snapped off just below the flower-stalks—not low down in the heart of the plant, as is sometimes done. This point may appear at first glance to be a trivial one, but it is of real importance. When broken off as suggested, it gradually withers and dries up, while when it is severed at the extreme base it decays in the middle of the plant and is likely to lead to serious trouble, and not improbably to the loss of the plant. Of course, if the blooms are set for seed, the head must be retained and encouraged to ripen its crop, which will be ready for harvesting, and, if desired, for sowing some time in the month of July. If it is not sown then, the seed must be held over until the spring, but many prefer summer for the task.

Repotting.—Opinions differ as to whether May or August is the better month for carrying out

Compost.—Elaborate mixtures were the order of the day in *Auricula* culture at one period, but now the man who can secure rather strong fibrous loam, sweet, clean leaf-mould and coarse sand is perfectly happy, and he will probably take two parts of the first-named and one part each of the second and third named, mixing, for preference, two weeks before actual use. No manure is necessary with such a simple but excellent compost as this. It must be pleasantly moist at the time of use, and as little water as is consistent with the safety of the plant should be given afterwards until the roots are working again. To obviate the necessity for the application of water it is sound practice to reduce the ventilation for a time, as this will result in the soil retaining its moisture for a longer period.

Pots.—These must be absolutely clean, and those 3½ inches or 4 inches in diameter are the most serviceable. Depth is far more important than width, and those who can secure pots which are exceptionally deep for their diameter should use them for *Auriculas*. The crocks used must be as clean as the pots which contain them, and they must be abundant, as perfect drainage is wanted. The top layer should be covered with moss to prevent the fine particles of soil washing down.

Three Good Varieties.—The coloured cover of this issue represents three good *Auriculas* sent to us by Mr. James Douglas. The grey-edged variety on the top left-hand corner is *George Lightbody*, an old one but still about the best of its section. On the right we have a beautiful green-edged *Auricula* named *Prince Charming*, and the yellow-flowered variety is *Dorothy Cutts*.
F. R.

PERENNIAL CANDYTUFT IN THE ROCK GARDEN.

THERE are few, if any, subjects in the rock garden that can equal the perennial Candytuft for effect at this time of the year. For weeks past the bold clump seen in the accompanying illustration has been a mass of pure white flowers, which from a distance look for all the world like a patch of snow in the sunlight, and there is every reason to assume that it will remain in flower for weeks to come. The perennial Candytuft is botanically known as *Iberis sempervirens*, and the variety illustrated is *Garrexiana*, which differs very slightly from the true species. As a plant for the sunny side of the rock garden it is not to be excelled, and if planted in a suitable niche on an old stone wall or overhanging rockwork, it will quickly cover the face of the rock and flower as freely as when grown on the flat. This *Iberis* is both hardy and evergreen, and in consequence it has a cheerful appearance even in the dead of winter, when desolation is the prevailing note in the wall and rock garden. It is an easy subject to cultivate, and once a clump is established, it will remain good for many years. The variety under note is a native of Southern Europe, and the usual mode of propagation is by cuttings or by division, both of which are readily effected.



AN EFFECTIVE AND SNOW-LIKE MASS OF PERENNIAL CANDYTUFT.

of zenith as far as the flowers of *Auriculas* are concerned in the South, while they are rather later, of course, in the more northerly districts. To keep the blossoms pure in colour and clean, the plants will be in frames or a cold house, but they will demand unlimited supplies of fresh air; indeed, it is impossible to give them too much of it. Each stem will be securely supported by a light, neat stick, and if the head bears from nine to fourteen pips, it will be satisfactory. All these should be perfect, and this will have involved the gradual removal of some of the buds in the centre, which are commonly the weakest, and perhaps the removal of very big ones, as these are sometimes out of character, and therefore mar the beauty of the plant. Neither the fingers nor anything else must touch the blooms, or they will be disfigured. As a matter of fact, there is probably no plant which

this most important of operations. It is, however, certain that excellent results will follow work done at both seasons, provided that all the details are correctly carried out. Personally, I prefer the earlier time; but when the plants are just starting to make late summer growth in August is equally as good. A plant that is ripening seed should be left severely alone, while one that shows the slightest signs of anything wrong should be turned out at practically any time, have the roots closely examined and be at once repotted. Each grower must, therefore, exercise his own judgment in this direction and follow the system which has hitherto brought him the best results. The soil must be firm, and all roots which are not really active should be cut off, the underground stem being shortened back.

THE GREENHOUSE.

DISEASES AND INSECT PESTS OF ORCHIDS.

IN the present article I am making a slight departure from my usual course, and intend to give a few hints concerning the pests that are to be found occasionally in Orchid-houses. Judging by the enquiries which reach the Editor from time to time, these hints should be useful to readers. First I would call attention to the

Cattleya Fly, which, if not absolutely eradicated, will soon do a lot of mischief. It was first imported some years ago, and is still on some species of *Cattleya*, so any that show signs of this pest should not be allowed to enter the collection. This fly deposits its eggs in the young growth, usually when the plant is dormant. The grub causes it to swell abnormally, and after reaching a certain stage it remains stationary and is useless. If we make a close examination of the shoot, we shall find one or more tiny holes, where the fully-matured insect has escaped. The best plan is to vaporise the house every third day for a week or two, and cut away any growths that may be affected and burn them at once.

Thrips and Aphides make their appearance at intervals, more especially during the summer months, but here again fumigation is the remedy. The former must never be allowed to gain a foothold, for they are extremely partial to the young leaves of *Odontoglossums*, and once they puncture the foliage, the mark can never be removed.

Scale is not very troublesome, and whenever it is seen the plants should be carefully sponged, using a weak solution of some reliable insecticide or soft soap.

Cockroaches, Slugs and Woodlice have also to be reckoned with, for they devour roots, spikes and flowers. Phosphorus paste and Chase's Beetle Poison are recommended for the first-named; and to capture slugs we often go round at night with a lamp, while Lettuce leaves and saucers of bran make effective traps for these marauders. For woodlice a Potato cut into slices and hollowed out in the centre may be placed around their haunts, and if examined periodically a large number will be caught.

Fungoid Diseases are few and rarely trouble the Orchid-grower; but in some establishments such genera as *Disa*, *Oncidium* and *Odontoglossum* lose the tips of their leaves. Now, this is generally caused by excessive moisture at a time when the temperature is below its normal level, or the "damping" may have been done with a falling instead of a rising temperature. Lack of ventilation is also another reason; but I have found that by giving a free circulation of air, less

atmospheric moisture, and by maintaining the thermometer at the proper figures, such a state of affairs ceases to exist, or is considerably reduced.

"**Spot**" Disease, which is sometimes seen on *Phalænopsis*, the young shoots of *Dendrobiums*, *Cattleya gigas* and *Habenarias*, is either caused by improper cultural treatment or the roots of the plants are in a bad condition. Both can be remedied by careful handling of the water-pot and admitting a little air from the top ventilators. The *Cypripediums* and some *Lælio-Cattleyas* are affected by a

Leaf Rust, but so far I have been unable to discover the cause. A cure, however, can be

but it further possesses the precious gift of a strong Clove scent. It is an importation from America, and has been shown in wonderful profusion and splendid form by Messrs. Wells and Co., Merstham, at each meeting of the Royal Horticultural Society held this year. It was not, however, until the meeting held on April 16 that it was staged for certificate, and it then received an award of merit. It possesses a non-splitting calyx, and the flowers measure about four inches in diameter.

ABUTILONS.

ALTHOUGH a nice warm greenhouse is best for these plants early in the year, they will do well in a cool structure during the summer months. They may be wintered in a house from which the frost is just excluded, but such treatment is too severe, and as a result the lower leaves perish. To obtain nice pot plants the cultivator must grow them on rapidly, and by judicious pinching of the shoots secure a dwarf branching specimen which will bear flowers freely. The latter are always more numerous on quickly-grown shoots than on those that are stunted.

A newly-rooted cutting should be placed in a 3-inch pot. One established in such a pot must be transferred to a 5-inch or 6-inch one, and if judiciously fed it may be allowed to flower in the latter. The compost should consist of fibrous loam, leaf-soil or peat and coarse sand. Rotted manure may be used at the rate of a 7-inch potful to a peck of the compost named. Only really firm potting is necessary at the final shift. The same kind of compost must be used, but in a rougher condition at each repotting. The soil should be in a medium state of moisture, the plants being lightly shaded and very lightly syringed twice a day after each repotting, but not watered until the soil in the pots begins to dry; then a good soaking must be given and careful general watering be the rule afterwards. If so treated the plants will not lose their lower leaves. Pinch the plant when it is about 7 inches high. Side shoots will soon grow, and these must be duly pinched, so that in due time a nice bushy specimen will be the result. Some of the variegated-leaved varieties are



THE NEW PERPETUAL CARNATION WODENETHE. (MUCH REDUCED.)

brought about by dipping the plants in a solution of liver of sulphur (sulphide of potassium), an ounce being dissolved in two gallons of hot water, which must be permitted to cool before use. Lay each plant on its side to drain before replacing it on the stage. Any reader in difficulties should write to the Editor, who is always most pleased to render assistance.

SENTINEL.

A NEW WHITE CARNATION.

THE new Carnation Wodenethe is a strong-growing variety with large, bold flowers of spotless white. Not only is it remarkable for its purity of colour,

charming, and a group of the plants while in flower look very light and attractive in a greenhouse or conservatory. Good varieties are: *Boule de Neige*, pure white, good habit; *Crimson Banner*, deep crimson; *Ernest Hempel*, crimson and yellow, with red veins; *Golden Fleecce*, a beautiful yellow; *M. L. Langiers*, crimson, overlaid with terra-cotta, a lovely variety; *Souvenir du Bonn*, variegated leaves, makes a lovely plant for the dwelling-room; *Sylvia*, a pure white-flowered variety with a strong constitution; *Symphony*, lavender, fragrant; and *Thompsonii*, variegated leaves, double flowers.

AVON.

DAFFODIL NOTES.

Is the Daffodil a "Florist's Flower"?—"Yes" and "No."—In asking this question, I must be understood to mean a florist's flower in the sense that a Tulip or an Auricula is; that is to say, that it is one which is wholly dependent upon itself and not upon its surroundings for its beauty, and that it must be viewed in this light when we form our judgment upon it. We see it by itself to the exclusion of all else, and so it comes to pass that it (the individual flower) has to be fashioned and formed to satisfy our sense of the beautiful. This is what is slowly being done. There are an increasing number of "experts" who think of it primarily as an isolated unit, and who are slowly evolving in their work of hybridisation and appreciation a flower whose "properties" tend more and more to an unapproached ideal. But there is another side to the Daffodil. The great army of gardeners cannot do without it in their gardens. I have come to the conclusion that it is difficult for either competitive classes or even trade groups to give by themselves the necessary help that the large majority of cultivators require. Should a national society ever come into being, I should strongly advocate "garden trials." They are wanted to winnow the chaff from the grain.

Choice Blooms at Vincent Square.

I was so often asked which I considered the best flowers (new) in the hall that I made it my business on the second morning to go round the different exhibits pretty carefully. The result was as follows: First, Avalon; second, Mrs. Ernst H. Krelage; third, Susan; fourth, Aladdin; fifth, Anthea; sixth, an unnamed Poet (?), which saw daylight in the early hours of the first morning when it was on Engleheart's stand, but which spent the rest of the time under the staging where "P. D." had his boxes. I would be greatly interested myself, and I think many of our readers would be, too, if some of our "experts" would write and say how far they agreed or disagreed with my selection. If this is done, however we may differ as regards the place in the class list in which we put the individual flowers, we will be at one in not selecting all of one "type." Happy for the Daffodil that it is so. Readers will like a description of my six. Avalon is a white-perianthed incomparabilis, with a diameter of $3\frac{1}{2}$ inches and a cup seven-eighths of an inch across. It has a great resemblance to the celebrated Challenger, but instead of a graduated red edge, it has a clear-cut band of colour all round the cup three-thirty-secondths of an inch deep, and the white of the segments is of quite Poeticus whiteness. It is an ideal bloom from a florist's point of view, and I congratulate Mr. Wilson of Bridgwater on being its raiser. Mrs. Ernst H. Krelage is the almost white Ajax that I wrote about last week. It received an unanimous vote for an award of merit from the committee. Susan is a white star-shaped incomparabilis (perianth

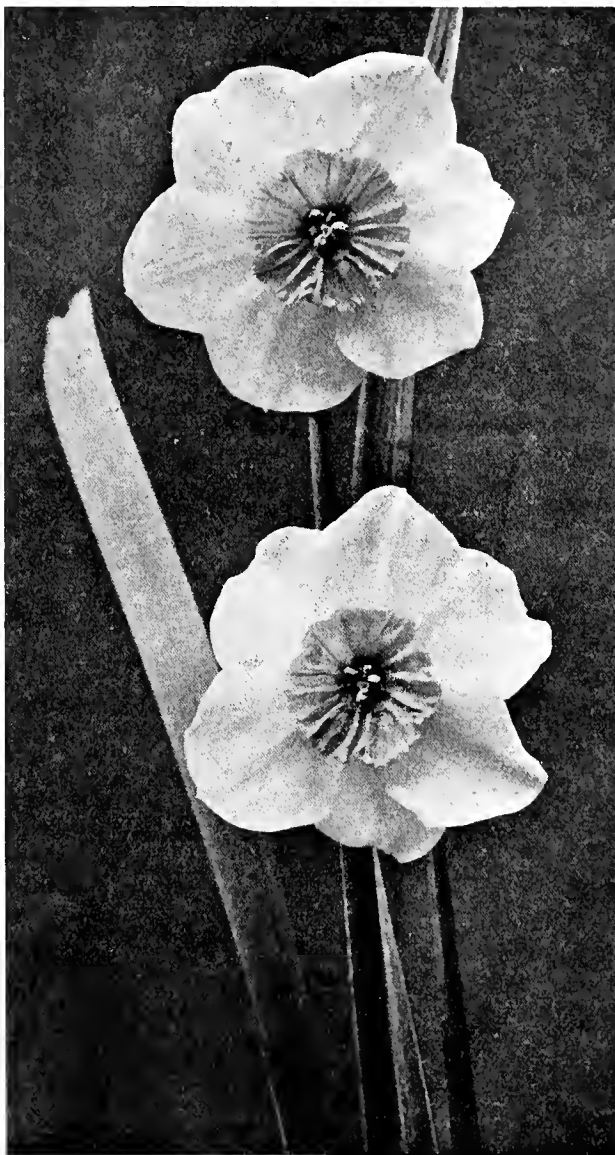
$3\frac{1}{2}$ inches, eye three-quarters of an inch in diameter), with a decided look of White Star about it, and with the spread-out segments of Princess of Holland or Pole Star. I held Susan and White Star side by side, and great as are the merits of the older flower, my heart went out to Susan. It was raised by Mr. P. D. Williams of Llanarth. Aladdin is one of the best, if not the very best, of the giant incomparables that have come from the Cossington manufactory of Mr. E. M. Crosfield of Pedestal fame. But instead of being a round flower, it

by Mr. W. B. Crannell, who got it from Messrs. Barr and Sons. I rather think they raised it. The last flower on my list is the pink-rimmed Poet already referred to. It has the charming look of Lavender, having a similar but deeper shade of pink in the edge of its cup. It is of medium size and circular in shape (perianth $2\frac{3}{4}$ inches, eye three-quarters of an inch). Another lovely variety that I must mention is Silver Spangle, raised by Mr. Herbert Chapman of Henry James and yellow Freesia fame. It was exhibited before the committee and received an award of merit. It is a very round flower, with a large pale yellow eye $1\frac{1}{2}$ inches in diameter and a slightly undulating white perianth $2\frac{3}{4}$ inches. (See illustration on this page.) With the bare mention of the giant white trumpet (shown by Mr. van Tubergen, jun.) Zwanenberg I must close my notes for this week. I have known it for a long time in its native home at Haarlem, and I look upon it as the best garden flower of its type in the world.

Presentation of the Barr Memorial Cup.

As notified in the gardening Press, this cup has been awarded by the management committee to the Rev. G. H. Engleheart, and on behalf of this body its chairman, Mr. H. B. May, made the formal presentation at the opening of the business of the Narcissus committee on April 16. In a few well-chosen words he sketched the work of the late Mr. Peter Barr as the famous pioneer collector and populariser of the Narcissus family, and then, addressing the recipient, said that he, like his ancestor Dean Herbert, would pass down to posterity as a great raiser of new varieties, to whom every gardener owes a debt of gratitude for his bountiful enrichment of the genus. Equally well chosen and to the point were the words in which Mr. Engleheart acknowledged the honour. With "gratitude and pride" he accepted it. Old as he was in years, he had never grown old as a lover of flowers. He found a true pleasure in the production of "new and better things," and he felt sure no one would have given or would ever give a heartier welcome to new men and to new and more beautiful varieties than old Peter Barr. It was a large and handsome piece of plate, and when he had overcome the difficulty of conveying it home he would show it with feelings of pardonable pride to his family and his friends.

This unique episode must recall to many the nineties of last century, when Mr. Engleheart's novelties were first introduced to a wondering public. A coloured plate of some appeared in THE GARDEN in July, 1889, and Seagull and Albatross in August, 1893. These were the days before inflated prices. Albatross could be had for £1 in 1897 and Bennett-Poë for 10s. each. I believe Will Scarlett was one of the first to fetch a very high figure. One has always heard that three bulbs (half the then stock) were bought on the purchaser's own suggestion for £100. Should these lines meet his eye, it would be of interest to know if the tale is a poecryphal or not. JOSEPH JACOB.



THE NEW NARCISSUS SILVER SPANGLE.

is a pointed one, and to state it as a proportional sum, as Spinnaker is to Lady Margaret Boscawen so is Aladdin to Pedestal. Anthea ($3\frac{1}{2}$ inches by 1 inch by $1\frac{1}{2}$ inches) is a pure white, round-looking giant Leedsii of that peculiar build which I seem to associate with Harold Cartwright and Jubilee (of Haarlem fame). It is a stiff, sturdy-looking thing, and somehow does not look as large as it really is. The reflexed edge to the cup and its resemblance to a miniature trumpet are very characteristic. It was exhibited

GARDENING FOR BEGINNERS.

CINERARIAS FROM CUTTINGS.

ALTHOUGH the usual method of raising Cinerarias is from seed, there is yet another way by which they can be increased, viz., from cuttings. It sometimes happens that a cultivator desires to work up a stock of a particular form, which may be an exceptionally fine variety, of good habit, or perhaps the colour may appeal



1.—THE PARENT PLANT AFTER FLOWERING IS CUT BACK, THIS ENSURES THE FORMATION OF BASAL GROWTHS.

to him, while, of course, there is a chance of a sport or a new break appearing which he wishes to perpetuate. When such is the case, the taking of cuttings must be resorted to. It is well known that some florists' flowers do not reproduce themselves absolutely true from seed. There is generally a percentage of "weeds" or inferior plants; and if the grower wishes to have a large batch, he must raise sufficient plants to allow for the weeding-out process.

Now, for an amateur with limited space at his disposal, requiring a few specimens only, the system advocated on this page should be useful. As the plants pass out of flower, the top part should be cut off. This will throw a certain amount of vigour into the lower portion, from which the cuttings are taken. The plants are placed in a shady spot under a north wall, and not over-watered, when in a few weeks the young basal growth will be large enough for removal.

Selection of Cuttings.—Care must be exercised in making the selection, and those showing signs of producing flowers must be discarded, for they will never make good, strong plants. An ideal cutting is one that is short and stout, with leaves at close intervals, similar to those shown in Fig. 2. It is prepared in a similar way to an ordinary Geranium cutting, taking away one or

two of the bottom leaves and paring off the base to a joint, when it is ready for insertion.

Small pots, or what are known as 60's, should be filled one-half of their depth with drainage, over which is placed a thin layer of moss, when it can be nearly filled with soil, which ought to be pressed fairly firm. The cuttings are then dibbled in with a pointed stick around the edge. Each one is made secure, with its base resting upon the compost. A hand-light or cold frame should be chosen, and if the pots are kept shaded from strong sunlight and the frame kept closed for a few days, root-action will soon commence. As they become rooted, admit more ventilation, and gradually harden them till the lights can be dispensed with. By this time they will be in a suitable condition for potting off singly, using pots of a similar size to those advised for the cuttings. Cinerarias should not be given a rich rooting medium, or they will produce a lot of coarse foliage, which is not a good sign for a fine head of flower. I have found that loam, three-fourths, and leaf-mould, one-fourth, with a little silver sand added, makes a useful mixture, from which excellent results can be obtained. The plants must be kept as cool as possible and potted on as they become ready till they reach the flowering size, viz., pots about six inches in diameter. Although Cinerarias are easily-grown plants, careful watering is essential at all times, for if overdone in this respect the whole plant collapses, and no amount of care and attention will bring it back to its former healthy state. S.

THE TREATMENT OF FORCED BULBS.

Those persons who have cultivated bulbs for a number of years and forced many in pots and boxes know how to treat the bulbs when the flowers have faded. Others, however, who have not grown bulbs before may be uncertain as to the correct way to deal with them. Often enough strong bulbs are thrown away, after they have been subjected to a forcing temperature in spring-time as useless. They are certainly weakened, but if given good treatment they will recover their strength in the course of a few years and be prolific in the production of flowers again. If planted out in borders where they can remain undisturbed for a number of years, the bulbs will once more grow naturally and produce flowers of more and more substance each year afterwards. Do not be tempted to dry off the bulbs prematurely. They soon appear to ripen if water is withheld; but they shrivel too much inside, and although the bulbs seem to be firm and ripe to the touch, they are not likely to flower. By all means select a warm, sunny corner

in which to place the pots and boxes containing the forced bulbs; but water them almost as often as before the flowering stage for a month or so; then gradually withhold the water, and when the "grass" has turned quite yellow and will come away from the soil freely if lightly pulled, turn out the bulbs, shake away the soil and store them in paper bags, made airtight, in a dry, cool room until the month of July or early in August, when they should be planted out in the borders as suggested. SHAMROCK.

THE TREATMENT OF NEW LAWNS.

Owing to the exceptionally hot, dry summer of last year, many owners of gardens have been obliged to renew their lawns, either during the winter by laying down turves, or quite recently by sowing grass seeds. Undoubtedly, the cleanest lawn can be obtained from grass seeds; but, in certain circumstances, where the owner lives in a country district and can procure good turves, he would be quite justified in using them. The way the new lawn should be treated depends, to a great extent, on the weather conditions after May comes in. If there are not frequent showers to keep the surface of the soil moist—it is quite moist enough below—water it through a fined-rosed watering-can; then the seeds will germinate freely if sown late. Guard the seedling grasses from attacks by birds, as the latter sometimes pull them up wholesale. Drive in a few sticks 6 feet apart, and fasten black cotton or thread from stick to stick about six inches above the ground; then the birds will be scared away for a time. The first cutting must be done with a sharp scythe, and not before the grasses are about five inches high; then it will be advisable to only take off the tips of the blades. The second cutting, also with a scythe, may be more severe, and afterwards use the mowing-machine, set rather high and without the grass-box. B.



2.—BASAL GROWTHS OR CUTTINGS BEFORE AND AFTER INSERTION.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Greenhouse.

Cinerarias.—Any time during the present month will be found the most suitable for sowing the seed of these popular greenhouse subjects, except for late displays, when next month should be chosen. Sow the seed thinly in clean, well-drained pans filled with a finely-sifted mixture of loam, leaf-mould and coarse sand. Seedlings may often be found germinating on the stages and potted up.

Ornithogalum arabicum.—This is an interesting subject for the greenhouse at this season and easily grown. After flowering, the pots may be stood out of doors in a sheltered spot.

Zonal Pelargoniums.—Pot on the young plants as becomes necessary. Firm potting must be practised, as this is conducive to short-jointed, strong growth. Avoid over-watering. Give the plants plenty of air and sun.

Malmaison Carnations.—These are not nearly so popular now as formerly. Assist the plants with a sprinkling of Carnation manure on the surface of the soil. Ventilate freely and keep a sharp look-out for the rust. Water only when the plants require it, and spray over the plants on warm days.

Acalypha macafeana.—These are extremely useful for room decoration, easily propagated and grown. Pot on young rooted plants as becomes necessary, and grow on in a warm house. Shade from bright sun, and ply the syringe among the foliage to keep it clean.

The Kitchen Garden.

Celery.—Preparations should by now be well in hand for planting out the earliest supplies. Celery is a moisture-loving plant. Dust occasionally in the early mornings with soot. This will do much to ward off the attacks of the Celery fly. Seedlings for the latest supplies should be pricked out on a warm border.

Celeriac.—This vegetable is yearly becoming more popular. Seedlings raised about the same time as for maincrop Celery will soon be ready for the open ground. Plant on a well-prepared piece of ground, but on the level, 18 inches apart each way. Treat them as advised for Celery.

Dwarf Beans.—Throughout the month make a sowing or two as necessary of these in drills about eighteen inches apart. A seed dropped at every 2 inches or 3 inches will suffice and allow for thinning later on.

Broccoli.—Make another small sowing now to maintain a succession for early spring use.

Cauliflower.—Another sowing should be made of such varieties as Early Giant, Autumn Giant or Mammoth.

Vegetable Marrows.—Make a sowing of these for planting directly out of doors for succession towards the end of the present month. Those that were planted earlier in frames will need occasional attention. Pollinate the flowers and water the plants when required, choosing the morning for this. Peg down the growths as these lengthen. More air as the weather improves may be afforded them, and when danger of late frosts is past, remove the frame entirely and allow the growths to extend at will.

Fruits Under Glass.

Melons.—Where the culture of these cannot be performed in houses, and even when it is, supplies can be augmented by frame culture. Where these are supplied with a flow and return pipe, an earlier commencement can be made, and the quality of the fruit can be considerably improved by the judicious use of artificial heat during dull weather and at nights.

Frame Culture.—From this date onwards a sowing may be made. Two plants to a light are generally planted near to the centre, one trained to the back and the other *vice versa*. A hot-bed of long strawy litter and leaves is an advantage. A few days before planting prepare the bed, which should consist principally of loam, together with a sprinkling of lime rubble, wood-ashes and a little artificial fruit manure. Select a warm day for transferring the plants to their fruiting quarters. Give a good watering in,

keeping the lights as close as possible for a few days. The plants will need syringing twice daily when the weather permits. Hero of Lockinge is still one of the best for general culture.

Tomatoes.—The earliest crops under glass will be colouring the bottom trusses, and to hasten development the plants may be stopped at the leading growth and the side growths kept removed. Give the plants manurial assistance now, and see they do not suffer for want of water. Pot on later crops as it becomes necessary, always leaving space for future top-dressings where possible.

The Flower Garden.

Gunneras.—These are pushing into growth, and care should be taken that late frosts do not injure them by providing temporary shelter.

Bedding Plants.—Give abundance of air to these whenever possible. Those already placed out of doors must be covered at night with some form of covering. Towards the end of the month will be quite soon enough for planting out, especially subjects that are none too hardy, and until then the bulk of the subjects in the spring bedding arrangements will continue to yield a good display.

Polyanthuses.—If certain colours are required for massing in beds next spring, the seedlings now in flower should be marked for the purpose, also any flowers that are unusually fine in colour or form from which to save seed. Seed may now be sown, selecting a shady border. Prepare as fine a seed-bed as possible, and sow in drills 6 inches apart.

The Rock Garden.—During this month many varieties of annuals of a dwarf nature that will give a brilliant display may be sown in bare positions on the rockery. Sow the seed thinly and broadcast, and rake in and protect from birds. If the weather is wet and cold, wait until it is easy to prepare a good seed-bed. For a narrow border exposed to the south, a brilliant display can be obtained by sowing thinly the mixed colours of *Portulaca*.

Hardy Fruit Garden.

For the present do not be in a hurry to thin any crops of fruits such as Peaches, Plums, Cherries, Apricots and the like, as many of them will be worthless. If very thick, thin those that are badly placed. Keep the trees well syringed on bright days.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Strawberries.—Thoroughly clean the earliest quarter of Royal Sovereign, after which place clean straw for the fruit to lie upon when ripening.

Small Fruits.—Raspberries and Loganberries may need the young shoots reduced in number if too many are pushing from the base of the old plants. Hoe the ground among the former. This is the time when weeds get a start if neglected.

General Remarks.—A watch must be kept for aphids appearing, to be followed by syringing with soap-suds strengthened with a very small addition of petroleum. Quassia extract is also a valuable aphicide, but more expensive. Peach leaves affected with fungus must be picked off and burnt, and disbudding and thinning attended to where necessary.

Trees and Shrubs.

Pruning.—If the more coarse-growing shrubs have not yet been trimmed, they should be attended to at once. When done annually, little labour is involved.

Laurustinus.—This is an invaluable shrub in the less cold districts, flowering as it does for months on end during the coldest part of the year. It merely requires those portions which bulge out to be removed, and, if used as a hedge, to be trimmed, but not hard pruned into shape.

Cuttings.—Quite a number of the better kinds of shrubs, *Deutzias*, double *Lilacs*, *Philadelphus*, *Hydrangeas*, *Roses*, *Buddleias* and others, may be easily increased by soft cuttings of the young shoots in the same manner as many soft-wooded plants are. I insert them in sand, kept constantly wet, in the propagating-pit, and as soon as roots

are formed they are potted or boxed and gradually nursed to a cooler temperature. Numbers at the present time are in the right condition to strike root.

The Kitchen Garden.

Seedlings.—Thin Carrots to 4 inches to 6 inches apart, and Parsnips to 9 inches to 12 inches, subsequently deeply stirring the surface of the soil.

Broad Beans.—These are much benefited by a bold bank of earth being thrown up on each side of the rows. Not only are the plants invigorated, but the soil serves to steady the haulm and to preserve it upright throughout the season.

French Beans.—These may now be sown, except on cold soils and in late districts. They prefer a very finely-pulverised and deeply-worked soil rather than much manure. Seeds need not be sown closer than 6 inches, and once germination is completed, every other plant should be removed, thus providing a space of 1 foot by 2½ feet between the rows. Scarlet Runners are slightly less tender, and should also be sown. If to be kept dwarf, allow a space of 4 feet by 2 feet.

Peas.—Shallow trenches, 6 inches deep, should be taken out for the later crops, so that when the seeds are covered the drills are 2 inches lower than the ground-level. When the crop succeeds Broccoli or late greens, it is not essential to cultivate all the ground, but the parts to be occupied by the Peas must be deeply cultivated. Thoroughly saturate the prepared trenches with water previous to sowing, unless, of course, an abundant rainfall occurs at the time.

The Flower Garden.

Carnations.—No time must be lost in supplying these with stakes, so that the growths as they spindle can be tied to them as needed.

Dahlias.—These should now be placed in cold frames and carefully ventilated by day and protected at night. Those that have filled their pots with roots should be transferred to larger ones, otherwise the stems get hard, the plants stunted, and they fail to get away into growth till some time after being planted out.

LOBELIA CARDINALIS.—The varieties are much better planted at once than retained till later in pots or boxes. To do them well the soil should be enriched to almost the same extent as for Celery. Plant rather deeply, after which saturate the ground with water, and apply a slight mulch or surface-dressing in order to retain the moisture for the longest possible period. Do not fritter away effect by planting a few together, but arrange in bold masses, or, if mixed with other plants, use enough to ensure effectiveness. An extremely brilliant effect is obtained by using it in conjunction with a dark blue Larkspur and a yellow Antirrhinum.

Antirrhinums.—These ought to be ready for planting, and, if so, should be planted without further delay. They succeed best in rather firm ground. Accordingly, in soil of a loose nature, once planting is completed, the beds and borders should be firmly trampled, observing, of course, that the ground is not wet. One has to exercise a degree of caution in the choice of colours, Fire King, Orange King and crimsons going well with yellow, but very badly with pink and rose shades, though apricot tints and white, if desired, associate with these.

The Plant-Houses.

Fuchsias.—These are now growing apace, and repeated pinchings will be required to form bushy plants for late summer flowering. Those in medium pots may also need shifting to larger ones, using as compost rough rotted turf and a fair proportion of rotted cow-manure.

Double Violets.—It is quite safe to take rooted pieces of these and plant them in an open quarter to produce flowering plants for next October. Though hardy, unless they have been exposed in the frames for a week or ten days previously, the young stuff may suffer from morning frosts: a mat or two thrown over the beds at nightfall will prove an efficient protection.

Rhododendrons, such as *Countess of Haddington*, *Duchess of Buccleuch* and *veitchianum*, just out of flower should have the seed-vessels removed and any extra strong growths of the past season cut back. Those requiring extended root space may be repotted now. They succeed splendidly in the siftings of Orchid peat, as well as in that of a less porous nature, and also in light, fibrous loam.

R. P. BROTHERSTON.

Tyminghame, Prestonkirk, N.E.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Brussels Sprouts.—These are probably the most highly appreciated of all the members of the Cabbage family, and growers endeavour to have a constant supply over the longest possible period. With the object of securing early buttons, planting may be done immediately if the youngsters are in condition and space is available. It is essential that the ground shall be deep and in excellent heart, but looseness must be guarded against, as it tends to encourage open, unsatisfactory buttons. If large varieties are grown, a distance of 3 feet in all directions must be allowed; but the smaller growers will be satisfied with 6 inches less each way, and it is more than probable that they will yield an equally heavy crop, and the quality is invariably superior.

Potato Planting.—In the majority of instances this important task will be finished before these notes are printed, but it is in no sense too late to plant; indeed, in many soils the results from planting early in May are better than those from April planting. The varieties to be dealt with will be late ones, to produce tubers for keeping right through next winter, and plenty of space is imperative between the rows, as the growth is strong. As a rule, 33 inches answers from row to row, with 15 inches from set to set in them; but occasionally it is wise to allow 36 inches between the lines, the distance in them remaining the same. Sets ranging from 2½ oz. to 3 oz. in weight are usually the best, and they may be 4 inches down in heavy land and 6 inches in light soils. Planting in drills is always preferable to doing the work with a dibber, though the latter is rather quicker.

Salsify and Scorzonera.—These tap-rooted vegetables are not as generally grown by amateurs as they might be. One would not suggest that large quarters should be devoted to them, but that one or two good lines should be sown, as the roots afford a most welcome change during the winter months. The ground must be prepared precisely the same as for Carrots or Parsnips; that is to say, full reliance is placed on mechanical culture and the use of manure is avoided. The drills ought to be 1 foot asunder, and clusters of three seeds may be dropped in them at intervals of 9 inches; this is economical of seeds and reduces the labour of thinning to the minimum.

Celery Trenches.—There is little doubt that by the middle or third week of the month there will be plenty of early Celery ready for planting out, and the sooner, therefore, the trenches are prepared the better. There is a fairly widespread idea that these must be deep, whereas they should be rather shallow than otherwise. In strong soils 8 inches is quite deep enough, while in light lands another 2 inches will suffice. The bottom ought to be dug, and in some instances the generous dressing of manure that is used can be worked into it; but if not, it must be put in a layer. In the actual planting there is one point that the amateur is urged to guard strenuously against, and that is putting the roots into the bottom soil that the cutting of the trenches exposes. By far the wisest course is to put in some entirely new material for the roots; but if this cannot be managed, then a layer of top spit must be thrown in, as it will be sweet and the roots will take quickly and satisfactorily to it.

Peas.—The early Peas, both those sown outdoors and those sown indoors and planted out about the middle of April, are coming on excellently, and give promise of yielding splendid crops. It is possible that the soil will be so dry as to render watering necessary, but in no circumstances should any be given until withholding it spells cessation of progress. To reduce the necessity for giving water, keep the hoe or the fork constantly going to create a covering of dust, as this will largely arrest the waste of food-bearing moisture. Frequent successive sowings will have to be made to maintain the supply, and no efforts must be spared to provide a deep soil containing plenty of food. These plants will have to bear when the weather is at its hottest and driest, and they will revel in the cool, moist rostrum. H. J.

ROYAL INTERNATIONAL HORTICULTURAL EXHIBITION.

Privilege to Gardeners' Societies.—The Board of Directors has decided to grant a special privilege to members of *bonâ-fide* gardeners' mutual improvement and similar societies. The secretaries of such societies purchasing not fewer than twenty admission tickets for the exhibition will be accorded a discount of 20 per cent. upon 1s. tickets and 10 per cent. upon all higher-priced tickets. A parcel of twenty tickets and upwards need not be composed of tickets all of the same value; in fact, it may be made up in any way convenient to the society so long as not fewer than twenty are purchased at the same time. Societies wishing to avail themselves of these facilities must apply to the secretary, 7, Victoria Street, Westminster, for their tickets on or before May 18, as no discounts can be allowed after that date.

Exhibition Cups.—Never before has there been anything like such an array of valuable cups for presentation at an exhibition of this nature. It is felt that the public should have an opportunity of inspecting the cups and plate, and it has therefore been arranged to exhibit them at the meeting of the Royal Horticultural Society on May 14 in the society's hall at Vincent Square, Westminster. In addition to this, they will be on view at the exhibition on May 22, 23 and 24, the first three days of the show.

Some of the Entries.—From the entries received it is evident that all types of Carnations will be represented in abundance. The tuberous-rooted Begonias will contribute some of the most brilliant colouring ever seen. There are three entries in a class in which each exhibit can claim an area of 200 square feet. Streptocarpuses, a race of greenhouse plants which has come into special notice during the past two years, have attracted four entries in a class for exhibits occupying 200 square feet each. In no division, however, is there more reason for satisfaction than in that for alpine plants and rockeries. Nine entries appear in the class for alpines arranged in spaces of 100 square feet, and seven entries in another competition for exhibits occupying 50 square feet. There will be at least fourteen great rockeries constructed in the open garden, seven in a class for rockeries of 600 square feet each, and seven each occupying 400 square feet. In the cut flower section Sweet Peas will figure largely, although most of the flowers will have been grown under glass, so as to be ready for the somewhat early date.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

POLYANTHUSES NOT SATISFACTORY (E. E. F.).—There is nothing in the appearance of the plants sent to indicate the cause of the trouble from which the Polyanthuses are suffering. Can you send some plants packed so that they will arrive in a moist condition, and also some of the soil in which they are growing?

SWEET PEAS (D. D. D.).—Of the varieties you name, preference might well be given to Nos. 1, 3, 6, 7, 8, 9, 12, 13, 14, 16, 17, 18; but the thing to do is to choose the finest that are available at the date of the show. The soil will answer admirably. Spare no efforts to open up the clay, and, if possible, incorporate vegetable refuse with it as well as manure.

CUTTINGS OF A TREE PÆONY (Mrs. H. W. G.).—The present would be a better time than autumn for taking cuttings of Tree Pæonies. They will be likely to give the best results if they are planted in sandy soil in a close frame and shaded from bright sunshine. If placed in a warm frame, be careful with the watering and shading, otherwise they may be scalded.

NARCISSUS BULBS DISEASED (Bulbs).—The Narcissus bulbs sent were in a decomposed condition and teeming with earthworms. They were so far gone, however, that it is impossible to be sure at this stage whether they were destroyed by these pests, whether they were damaged when they were potted, or injured by becoming too wet during the autumn, when growth should have been commencing. If they were stood outside without any means of checking water falling on the pots, it is quite likely that they have suffered from the presence of too much water.

LILY DISEASE (J. A. A. S.).—The leaves are affected by the fungoid disease known as Lily cluster-cups; but whether the bulbs or the ensuing season's flowering will suffer therefrom depends not a little upon the severity of the attack. In the present circumstances the best remedy would be to gather all diseased portions and burn them, subsequently syringing the plants, wetting both surfaces of the leaves, with a solution either of permanganate of potash or sulphide of potassium at the rate of 1 oz. to two gallons of water. By adding a little soft soap the solution will adhere more to the plants.

ANEMONE DISEASED (Wirswal).—In the dried-up condition of the plant, as received, we could not form any definite opinion as to the cause of the trouble; and whether the plant had been injured by a fork, poisoned by manure, or the victim of some fungoid attack we are unable to say. The plant certainly is occasionally attacked by fungus. In the crown of the plant there were present a few bulb mites, though not in sufficient numbers to account for the mischief done. These, however, must not be looked upon other than as a pest, and to certain types or phases of plant-life are troublesome and even dangerous. You might clear away the soil from the plants giving indications of failure, and having cut away the decayed part and burnt it, dust a little lime among the plants.

TREES AND SHRUBS.

SHRUBS AND CLIMBERS FOR A WALL (Nampfwyche).—The following shrubs and climbers are suitable for your wall: Ivy Emerald Green, Ivy aurea elegantissima, Crataegus Pyracantha variety Lelandii, Jasminum nudiflorum, Garrya elliptica (male), Forsythia suspensa, Cydonia japonica, Coroneaster microphylla, Clematises in variety and Hydrangea altissima. With the exception of the Ivies and Clematises, the plants might be placed as mentioned. Place about seven feet apart to allow ample room. Leave out any of the plants you think proper, for it will not require all those mentioned for a wall 50 feet long. We advise leaving out Clematis if you are not very particular about including the same. The best red Lilac is Souvenir de L. Spat; a good one with pinkish flowers is Emile Lemoine. The varieties described as blue-flowered are usually various shades of lilac and purple, not shades such as you suggest. A good dark one will be found in Delphine, and Marc Michell is a good variety with lighter-coloured flowers. You cannot do better than select Laburnum Watereri for the Laburnum you require.

PRUNING METROSIDEROS (J. P.).—It is not necessary to prune *Metrosideros floribunda* every year, although an occasional pruning is attended with good results. The work must be done as soon as the flowers fade, and it is usual to remove the branches just beyond the flower-heads and thin out the weaker shoots from the centre of the plant. During the growing season it is necessary to give stimulants in the form of weak liquid manure, and plants usually bloom most satisfactorily which are stood out of doors in full sun during summer.

TRANSPLANTING DAPHNE MEZEREUM (W. H. C.).—October is a good month to transplant bushes of *Daphne Mezereum*, although there is no reason why you should not do the work any time between the beginning of October and the beginning of February. By transplanting early, however, the plants have a good chance of becoming established before the ground gets thoroughly cold. By delaying the planting until late spring, the flowers are injured; but if you are prepared to sacrifice the flowers for one year, February is almost as good a time as October.

CYTISUS NIGRICANS (L. B. W.).—*Cytisus nigricans* is less suitable for planting on poor ground than many other kinds of Brooms, for it requires rather careful cultivation to obtain it at its best. It is likely that it would succeed for two or three years and then gradually die out. We suggest that *Geonista pilosa*, *Cytisus praecox* and double-flowered Gorse be planted for preference. You would also find that the various kinds of *Cistus* and *Helianthemum* would thrive excellently in the position, and be very showy when in flower; in fact, the poorer the soil, the more satisfactory are the results, as a rule.

PRUNING SHRUBS (Era).—The following newly-planted shrubs about which you write will not require pruning this year: *Aodromeda speciosa*, *Staphylea colchica*, *Zanthoxeris sorbifolia* and *Styrax japonica*. *Cesalpinia japonica* may have the ends of the branches shortened by 9 inches or 12 inches, and *Buddleia variabilis Veitchiana* may be cut back hard, last year's shoots being removed to within two or three eyes of the base. The work ought to have been done six weeks ago; therefore do not delay it any longer. The first four will not require any regular pruning. Simply remove any dead pieces. The latter two shrubs must be pruned as recommended each February.

THE FINEST SPECIMEN OF ABIES ALBERTIANA (J. McNair).—Numerous large specimens of *Abies albertiana* are referred to in "Trees of Great Britain and Ireland," by Messrs. Elwes and Henry. The largest authentic specimen in the country to which reference is made is the one with which you are acquainted at Hafodunos in North Wales. When measured in 1904 this was found to be 94 feet high and 8 feet 5 inches in girth. One at Singleton Abbey, Swansea, is said to be 110 feet high, but no accurate measurements appear to have been taken. A tree at Hemsted, Kent, exceeds ninety feet in height, one at Dropmore is between seventy feet and eighty feet high, and several trees at Penlenger, near Swansea, are from seventy feet to eighty-five feet high.

WATER AT ROOTS OF A TREE.—I think a case has been recorded lately of water rising from the root of a Birch tree. A similar case has occurred in a London garden. The tree is a Sumach, thirty years old, but small. A damp spot appeared when the weather was dry last week, and two days ago I dug a hole a foot square, in which the water has stood constantly 7 inches deep. The peculiar part of the matter is that it stands at a higher level than the surrounding gravel walk, and in the middle of a dry, recently-dug bed. The soil is so loose that I feel sure there must be a constant supply running in to maintain the puddle. It is not credible that a small tree could supply gallons of sap; the only explanation that occurs to me is that the tap root may have got down to subsoil water, which the tree may be pumping up through some surface roots, which may have been cut when the ground was dug last winter. We had a pump many years ago; the water was 14 feet down, and has long been drained away. There has never been the slightest sign of any spring in the garden.—H. B. P., *West Brompton*. [It is quite likely that the wet places noticed in your garden are due to the recently-injured branch of a tree, or, perhaps, a root. We have known injured branches of trees, particularly Maples and Birches, make quite large puddles on the ground by the constant drip of sap at this time of the year. There is no reason to suppose that the tap root could draw water from below the ground and disperse it again as you suggest. If you were to get some local expert to examine your trees, he would probably be able to locate the reason for the excess of moisture.—ED.]

THE GREENHOUSE.

INJURY TO CHRYSANTHEMUM LEAVES.—The leaves of the *Chrysanthemum* seem to not show any evidence of the attack of insect or fungus pests upon them, but they are so smothered with sulphur that some of the evidence which may have been present may well be now obscured. From what can be seen, however, we would suggest rather that these plants have suffered either from cold draughts, from some error in watering, or from being placed in too strong a soil. The texture of the leaves is very thin.

CEREUS FROM MADEIRA (West Sussex).—As the genus *Cereus* is such an extensive one, we cannot even suggest what may be the species to which you refer. We can only say that your better way will be to keep the plants in as warm and light a position as possible in the greenhouse, and give them very little water during the winter months. Prevailing other conditions are favourable, there is no reason why *Daffodils* should not do equally well in a south aspect as where they are now, and, judging from your description, we should say that the suggested position would be likely to suit them. The best time to

lift them is in July, and they should be planted with as little delay as possible. The ground must be well dug, and the bulbs should be planted in irregular drifts or masses rather than in formal lines.

INJURY TO FORCED LILIES (Ignaramus).—When *Lilium longiflorum* is hard forced, some of them often go like the specimen sent. It is most probable that there is an inherent weakness in those particular bulbs, so that they cannot withstand the additional strain of forcing. These *Lilies* cannot be forced for several years in succession, and those that flower after the manner of that sent need not be persevered with; at least, we had two or three behave in the same way, and as an experiment kept them till the second year, when they did no better, and were then thrown away.

DAHLIA CUTTINGS (W. S.).—An important item in the propagation of *Dahlias* is to obtain good cuttings, as if they are drawn up and weak, failure will most likely occur. In starting the tubers they should be just covered with soil, leaving exposed the portion from whence the new shoots will spring. Placed on a stage in the greenhouse, the shoots will grow short and sturdy, and when about 3 inches in length they make the best of cuttings. The entire shoot should be chosen for the cutting, including the somewhat enlarged base. The shoots must not be allowed to dry after being cut off the parent plant. Sandy soil is preferable to Cocoanut refuse as a medium in which to strike the cuttings. They should without difficulty strike root in a frame with a little heat; but if there is too much moisture therein, so as to set up damping, a little air on the frame for a time will prevent this. They must be shaded from the sun till rooted. As to the time the air is allowed to remain on the frame in order to dry up any superabundant moisture, we cannot say, as you will be the best judge of that, for whether the small frame is in the greenhouse or outside you do not say. At all events, the fact that the previous cuttings damped off would indicate that they were subjected to too much moisture: it may be in the atmosphere or in the soil.

KITCHEN GARDEN.

TOMATO PLANT FOR INSPECTION (L. L.).—The Tomato plant appears to lack potash. Give the plants a little each week in the water; about half an ounce to one ounce of sulphate of potash in the two-gallon can once a week will be sufficient probably. The dropping of flowers is usually due to some error in watering.

SEAKALE CULTURE (P. H.).—Your culture of *Seakale* under pots is altogether old-fashioned and out of date. On modern lines *Seakale* is planted in the form of root-cuttings each spring. New crowns are made, the roots lifted in the autumn, trimmed, and their heads blanched in warmth and in darkness, as wanted during the winter. In that way you can have 200 crowns to cut where you now may have only twenty. The proper steps to take with permanent *Seakale*, before covering with pots in the winter, is to see that all leafage is dead and cleared away from the crowns. You can place pots over the crowns any time during the winter; but it is well not to be too hasty, and January may generally, for small breadths, be soon enough. Of fifteen pots, you may cover one-half of the crowns in January, the rest in February; but the latter may have little mounds of dry ashes placed over them to keep off the frost. The putting of long stable manure and tree leaves, after being twice turned and mixed, over the pots, creates some warmth inside them. That is done for a very brief time, as probably such manure coverings, especially if heavy rains prevail, retain warmth but for a week or so. The next primary purpose is excluding light and air, because if these were admitted into the pots, the *Seakale* heads would be green and quite inedible. It is only by fully excluding both, light especially, that *Seakale* will become blanched and fit for eating.

MISCELLANEOUS.

MANURING DAFFODILS (Ascot).—Your conclusions are a little faulty. The best method to manure *Daffodils* is by way of the soil through the medium of their roots, and the requisite food should be present in the soil when the new roots are emitted in early autumn if these are to perform their proper functions. You might, of course, manure the plants now as you propose; but in so doing you would only be affording them a tonic, a sort of pick-me-up, by the way. You see, in April more than one-half of the season's work of the plant has been accomplished, roots and root-fibres, Nature's system of communication between soil and plant, having long been in operation, and upon the food supplied and the powers of the plant to assimilate it will depend the strength of the coming bulb. The new bulb now forming is the direct result of root production and a leaf development which had their beginning months ago; hence to wait till April before doing anything is to wait too long. Obviously the right time is at, or before, the planting season. The *Daffodil* is a deep-rooting subject, and surface-dressings in spring should take the form of liquids or rather quickly soluble manures if the plant is to receive immediate benefit therefrom.

NAMES OF PLANTS.—B. A. I.—*Grevillea rosmarinifolia*.—T. W., *Warwick*.—*Prunus Mahaleb*.—F. A. B.,—*Acer rubrum*.—M. W., *Atrechturck*.—*Spiraea* (Thunbergii) and *Prunus japonica roseo pleno*.—M. K.,—*Spiraea van Houttei*; 2, *Staphylea pinnata*.—P. H.,—*Amelanchier canadensis*.—Constant Reader.—1, *Juniperus chinensis*; 2, *Populus albus*; 3, *Acer platanoides* variety; 4, *Acer platanoides*; 5, *Acer Pseudo-platanus*; 6, *Spiraea Thunbergii*; 7, *Spiraea prunifolia flore pleno*; 8, *Ulex europaeus*.—*Cashgate*.—Probably *Juniperus*

bermudiana, but it is impossible to identify such a small scrap. Many of the *Junipers* and *Cypresses* change in character with age.—Mrs. B., *Wareham*.—*Erica mediterranea*. The *Tulips* are garden forms of *Tulipa gesneriana*, unable to match.—D. E. S.,—*Prunus japonica flore pleno*.

SOCIETIES.

WARGRAVE AND DISTRICT GARDENERS' ASSOCIATION.

The last meeting of the session took place on Wednesday evening, April 17, when there was a good attendance of members. The subject for the evening was "Chrysanthemums," and Mr. C. Foster of Parkwood Gardens, Healy-on-Thames, dealt with it in a very practical way. He referred to exhibition, bush and outdoor plants, giving special and minute directions for their successful culture. At the close a unanimous vote of thanks was accorded Mr. Foster, who suitably replied. A good discussion ensued, many of those present taking part. There were some noteworthy exhibits, that of Mr. E. Feltham of the Wargrave Hardy Plant Farm, Limited, being of exceptional merit, showing what can be done with plants of the hardy section. Mr. Gray showed three vases of *Roses*, and Mr. Howe some finely-grown *Acalypha Sanderi*, and each received the society's certificate of cultural merit.

GLAMORGAN DAFFODIL AND SPRING FLOWER SOCIETY.

The ninth annual show of this society was held at Bridgend on Wednesday, April 17. As in the case of so many shows this spring, the blooms in the *Daffodil* classes were nearly all past their best; but the hardy spring flowers, *Rhododendrons* and flowering shrubs were a beautiful sight, and reached a high standard of quality. Space will not allow of a description of every prize-winning exhibit, but one or two flowers deserve special notice.

An award of merit was given to two seedling *Rhododendrons* shown by W. G. Vivian, Esq. One was a flower the colour of which is difficult to describe, nearly white, but heavily tinged with bluish pink, very lovely. The truss is perfect, each pip being clearly formed. The other flower was like a large and much-improved *R. nivium*, the petals more rounded and a good truss, the colour being a purple mauve.

Sir John Llewelyn also secured an award of merit for a fine seedling *Rhododendron* of brilliant crimson colouring.

Among the *Daffodils* were several seedlings which, had they been in fresh condition, would probably have been worthy of awards of merit. There was, however, one award given to a lovely little triandrus seedling, with white perianth and lemon cup, exhibited by C. H. Cave, Esq., in his first-prize group of seedling *Daffodils* not in commerce.

We should like to make the suggestion that the society should adopt the Royal Horticultural Society's Classification of *Daffodils* (1910 edition) for the purposes of the next schedule. This classification may not be a perfect one in some ways, but it is very convenient both for exhibitors and judges at shows; and although some few varieties may be re-classified in future editions, the scheme is not likely to be altered.

Messrs. Barr and Sons had a good group, including several fine varieties of new *Daffodils* and some *Tulips*.

Messrs. Cartwright and Goodwin also exhibited many of the more moderate-priced sorts in good condition and well arranged.

The following is a list of the principal prize-winners:

OPEN CLASSES.

Collection of *Daffodils*: First, Mrs. Ridley; second, Mrs. Moore Gwyn; third, Mrs. Booker.
Group of seedlings: First, C. H. Cave, Esq.; second, Miss Ida Pope; third, Sir John Llewelyn.

OPEN TO MEMBERS.

Collection of twenty varieties: First, Sir John Llewelyn; second, Mrs. Godfrey Clark.

Collection of twelve varieties: First, Mrs. Williams; second, Mrs. Godfrey Clark; third, Mrs. Ebsworth.

Collection of fifteen varieties: First, Mrs. Ridley; second, Mrs. Godfrey Clark; third, Mrs. Moore Gwyn.

Collection of fifteen varieties: First, S. H. Byass, Esq.

Collection of twelve varieties (novices): First, W. B. Hallows, Esq.

Six *Magni-Coronati Daffodils*: First, Mrs. Mackintosh of Mackintosh.

Six *Medio-Coronati Daffodils*: First, B. R. S. Pemberton, Esq.

Six *Parvi-Coronati Daffodils*: First, B. R. S. Pemberton, Esq.

Single bloom of *Magni-Coronati Daffodil*: First, Mr. Caleb Bryant.

Single bloom of *Medio-Coronati Daffodil*: First, S. T. Colville, Esq.

Single bloom of *Parvi-Coronati Daffodil*: First, Mrs. John Nicholl.

Four *Poetaz Narcissi*: First, Mr. Caleb Bryant.

Bowl of *Daffodils*: First, Mrs. H. Pritchard.

Basket of spring flowers: First, Miss N. Pritchard.

Six *Hyacinths*: First, Mrs. Oliver Jones.

Six *Primulas* (plants): First, Sir John Llewelyn, Bart.

Group of *Rhododendrons*: First, W. G. Vivian, Esq.

Six *Rhododendrons*: First, W. G. Vivian, Esq.

Group of flowering shrubs: First, Miss Talbot.

Six jars of flowering shrubs: First, S. H. Byass, Esq.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Fruit Blossom and Frost.—In last week's issue of *Country Life* there is a most interesting article dealing with fruit prospects for the current year, the opinions of professional growers in all parts of the country being included therein. Generally speaking, the frost does not seem to have done as much damage as in some previous years, except with early Plums, no doubt owing to the absence of moisture. In America the protection of flowering orchards from frost by means of smudge fires is largely adopted, but for some reason or other does not appear to find favour with fruit-growers in this country. It has, we believe, been tried by a few growers, but not with any large degree of success. It would be of considerable interest to fruit-growers throughout the country if those who have tried this system, or seen it tried, would give their opinions for or against it, and we shall be pleased to publish letters on the subject.

An Interesting New Zealand Shrub.—Although rarely met with outside botanic gardens, *Coroeka Cotoneaster* is sufficiently showy to be brought into general use. In the South and South-West Counties it would thrive in the open ground, while in less-favoured localities it is worth a position against a wall. Belonging to the *Cornus* family, it forms a dense bush of small, twiggy branches, which are rather sparingly clothed with small, rounded, dark green leaves which have a silvery under surface. The yellow, star-shaped flowers are produced during the latter part of April and May. They are nearly half an inch across, and are succeeded by small, oval, orange scarlet fruits, which ripen in autumn. It thrives in loamy soil, and also succeeds in a compost containing peat. Cuttings of young shoots inserted in sandy soil in a close propagating-case may be rooted during the summer. A well-flowered example is to be seen growing against a wall with a southern aspect near the Water Garden at Kew.

The New Railway Bill and the Horticultural Trade.—The new Railway Bill introduced by Mr. Sydney Buxton and now before the House of Commons will, if passed in its present form, hit the nursery, fruit and market garden trades very seriously. In the Railway Bill of 1894 it was stipulated that a railway company, before increasing its rates for goods, should satisfy its customers that such increase was reasonable. The present Bill, however, enables the railway companies to increase their rates where it is necessary to meet increased expenditure, and in the second clause states that "it shall lie on the complainant (*i.e.*, the customer of the company), notwithstanding anything in the said section, to prove that the increase is unreasonable." This, of course, is

quite impossible, unless the complainant can have access to the railway companies' books. Sections III. and IV., dealing respectively with experimental rates and packing, are also calculated to seriously affect the horticultural trade if passed unamended. Copies of the Bill can be obtained from Messrs. Wyman and Sons, Fetter Lane, London, price 2d., and we advise all connected with the nursery and market gardening industries to read it carefully and communicate with the Secretary of the Joint Railway and Parliamentary Committee, Tavistock Hotel, Covent Garden, London, W.C., for fuller particulars.

New Hybrid Saxifrages.—One of the most interesting exhibits at the last meeting of the Royal Horticultural Society was the beautiful and unique collection of hybrid Saxifrages staged by Mrs. Lloyd-Edwards. These were mostly of the Mossy section, and several varieties were really magnificent. For instance, *sanguinea superba* was the richest colour of its kind we have ever seen. The newly-opened flowers are rich, glowing scarlet, the colour fading somewhat with age. *Rose Beauty*, with bright rose flowers of medium size and compact habit, and *Queen May*, pure white, flowers large, were two others of exceptional merit. Then there were two in the raising of which the British Saxifrage, *Saxifraga granulata*, had been used as a parent. One of these was named Mrs. J. F. Tottenham, and is illustrated on page 232. As will be seen, its habit is compact and good, and the flowers are large, of good form and pure white. The other was taller and had flowers more star-shaped and white. This was named *Comet*.

A Beautiful Burmese Tree.—Visitors to Kew during the next week or two should not fail to visit No. 1 House, near the Main Gate, to see *Amherstia nobilis*, a beautiful Burmese tree, in flower. Upwards of twenty feet high, the specimen in question has a wide-spreading head clothed with large pinnate leaves. At the present time a large number of pendent racemes of scarlet, yellow-tipped flowers make the tree one of the lions of the gardens, for not only are the individual flowers of good size and showy colour, but they are borne, six to twelve or more together, in racemes up to a foot or more long, which are suspended from long, slender stalks. Unfortunately, it is only in large, lofty structures that it can do itself justice; therefore it is not a tree to recommend for general cultivation. Where a large glass-house exists in which a stove or tropical temperature is maintained, however, it might well be included among the occupants. It is said to have been originally introduced in 1837, and to have been first flowered by a Mrs. Lawrence in 1849. The name of *Amherstia* was given in honour of Countess Amherst.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The International Exhibition.—As most of our readers are aware, the Royal International Horticultural Exhibition is to be opened by Their Majesties the King and Queen at the Chelsea



MESSRS. JAMES CARTER AND CO.'S JAPANESE GARDEN AT THE CHELSEA HOSPITAL GROUNDS.

Hospital grounds on the 22nd inst., and promises to be the biggest of its kind ever seen in this country. We shall be pleased to receive from exhibitors from now onwards particulars of their exhibits, more especially descriptions and photographs of any new flower, plant, fruit or vegetable that they may be showing. The largest tent that is in course of erection is for plants; it measures between 600 feet and 700 feet in length and has a total width of about two hundred and eighty feet. The area of this tent alone is about three and a-half acres, or twice the floor space of Olympia. The special tents for France, Holland and Belgium are each 470 feet by 40 feet. For cut flowers there are two tents, one 600 feet by 40 feet, and the other 380 feet by 35 feet. The Orchid tent, which is 250 feet by 70 feet, will be heated day and night by means of hot-water pipes. Leading from the Orchid tent is to be an annexe 140 feet by 70 feet for fruit and vegetables. To generate the electricity for lighting purposes, a 300 horse-power engine is being installed, and the grounds will be illuminated every night during the show. We understand that there will be more individual lights than are in use at Liverpool Street Station. The two illustrations on this page will give readers an idea of the work that is now proceeding at Chelsea.—H.

The Double-Flowered Gorse.—I can very fully bear out all that is claimed for this plant in THE GARDEN, page 201, issue April 27. In Hampshire, especially in the New Forest district, there are scores of acres of Gorse growing in shallow, stony soil and on hot, dry banks. As stated in the article I now refer to, the plants get very leggy, and it is necessary to cut them down at stated intervals in order to keep the face of the bank well clothed. In some gardens, however, the double-flowered Gorse is grown in groups on dry banks with great success. I have seen strong, sturdy specimens growing well year after year in a rooting medium of gravel and peat not more than 6 inches deep on a bed of gravel. A stock of young plants should be raised every four or five years to replace those that may not be thriving satisfactorily. If the tips of the young shoots are

cut off about three inches long and inserted half their length in a firm bed of very sandy soil in a cold frame facing the north, they will soon root and grow into neat little bushes.—AVON.

Hardiness of *Coronilla glauca*.—A recent note in THE GARDEN spoke of a plant of the above having wintered out of doors at Chelmsford. Since then I have seen three or four specimens in a fairly open garden at Frinton-on-Sea, which must be unique for East Anglia. These have been outside for several years, and the largest specimen now measures quite 5 feet in diameter. It is fully a yard in height, and is growing on a rather dry bank. Its perfectly-rounded head is now clothed with thousands of flowers, which on a sunny morning in April made a glorious display of colour.—C. WAKELY, Chelmsford.

Exhibiting Daffodils.—I am glad Mr. Jacob has entered this discussion, page 191, issue April 20, and I think we are now in a fair way towards some solution of this somewhat vexed question. There is no doubt we all had the trade groups in mind when we approached the subject, though I think there is plenty of room for artistic arrangement in the competitive classes also, without the chaos and the doubly confounded confusion which Mr. Jacob is so much afraid would follow any attempt at tasteful arrangement. I always like to see the competitive exhibits set up with some idea of helping to add to the general tasteful effect of the exhibition, and I have never felt the least little bit inclined to scratch my head until baldness followed, nor sink into the depths of profound perplexity, merely because the exhibits I have been asked to adjudicate on have not been

set out with geometrical precision. The danger to avoid is the tendency towards ignoring all but the flower. I want to see the stem cut full length, and I want to see the blooms staged as grown, unfaked, unbecolored and unthumbed. I would disqualify flowers that had been in any way manipulated, as I feel that this is all-important for the future welfare of the Daffodil, for the reason that it is sometimes very difficult for even an experienced hand to detect whether that extraordinarily flat crown you see is really as the flower would grow naturally, or whether the exhibitor has yielded to the temptation of flattening it out with his thumb. I have heard several well-known exhibitors, and, alas! judges too, say that they see no objection to this manipulation. So I am afraid it will be by the force of public opinion only that such practices, which I consider amount almost to dishonesty, will be stopped. Another point I wish to express my views upon is the class of flower which is considered worthy of a certificate or an award of merit by the various societies. Some excellent things come up for

awards, but how often does one hear the remark passed about a flower, "Oh, yes, it is a nice thing, but it is not a show flower!" What do the general public care whether a variety is considered to be a show flower according to our advanced ideas, so long as it is a good garden plant and useful for cutting and general decorative purposes? and what is the use of an award except as a guide to the general public? I am afraid we have got on the wrong track, and the sooner we turn back the better. I contend that no award should be given to any variety, however perfect the bloom may be from our show point of view, unless it is a good garden plant and useful for decorative and market purposes; then we should be helping the people who will sooner or later be using our new Daffodils instead of in many cases misleading them. Mr. Jacob says it is not so much whether we are to have tasteful arrangement, but what that tasteful arrangement shall be. I say that directly you begin to lay down rules as to how one is to arrange one's flowers, then you take the first step in the wrong direction. Give points for arrangement and let each exhibitor exercise his or her own taste, and you will soon find that those who are lacking will copy those who have the happy gift, for the very reason, if for no other, that they will lose points if they do not. The things that really annoy me are those wretched paper collars used to keep the perianth segments from reflexing. I have even seen them shamelessly left on the flowers during a show. More often, of course, they are left on until the last moment to keep refractory flowers from going all shapes, and are taken off just before the judges come round. I have seen flowers arrive at a show trussed up to such an extent with cardboard and stamp paper that very little of the perianth was visible, looking every bit as if some amateur enthusiast had been practising first aid on them. There is certainly great need for some definite pronouncement on this point. No one in his serious senses can surely wish to see



THE LARGE TENT AT THE "INTERNATIONAL" IN THE COURSE OF ERECTION.

the blooms exhibited "as it were on a paper"! and I cannot see why our Daffodil wares should not be exposed for sale "on the grand bank of harmonious beauty," each flower adding to the general artistic effect of the whole exhibition. I would like to hear more of what the public think about it.—W. A. WATTS. [We should be glad to hear the opinions of other readers on this subject, but notes should be brief.—Ed.]

Potentilla Valderia.—I must have grown the little *Potentilla* known by this title for well-nigh thirty years, but it was some time before I was able to trace its name, and it is not yet too well known, rarely occurring, for example, in catalogues. It is a neat little species, with white flowers (said to be "yellowish white" in the "Dictionary of Gardening," but this is, I think, a little too depreciative of the colour, which is a fairly good white) and neat little leaves, which are variegated green and yellowish and silvery white. The flowers are somewhat sparse, but the foliage is decidedly pretty, even to those who do not, as a rule, approve of variegated-leaved plants. A small mass of this *Potentilla* looks quite silvery in its tone, and is set off by the white flowers. It is a native of the mountains of Piedmont and other parts in the vicinity, and is quite hardy with me. I have here a plant, apparently a seedling, which has not the variegated leaves of that which I was told was the type, and is the one mostly in nurseries. Probably the green-leaved one should be the typical plant, and my seedling is really a reversion to that. It will do on a dry position, but seems to prefer a considerable amount of moisture. It is readily increased by division.—S. ARNOTT, *Dumfries*.

A Rare Italian Cowslip (*Primula Palinuri*).—This is a handsome, vigorous-growing species from Italy, where it grows in the chinks of rocks on the Neapolitan Apennines above Cape Palinuro, whence it takes its specific name. Although coming from such a southern locality, it is hardy in this country when planted high up on the rock garden in the fissures of rocky boulders, or in thoroughly well-drained stony soil. When planted on the level or in a sloping position, as in the illustration, the plants should have the protection of a piece of glass during the winter months. When planted in vertical fissures, such protection is not necessary except in very severe weather. It is one of the earliest members of the family to flower, producing its umbels of drooping yellow, Cowslip-scented flowers in March. The flowers are peculiar in that they are seldom fully expanded, always being in a half-opened condition, as shown in the illustration of a plant flowering during the latter end of March. In its native home it is said to be somewhat rare, and, owing to the attentions of collectors, is in danger of being exterminated. But it is of very free habit, and readily increased by means of offsets, which are produced freely when the plant is well established. *P. Palinuri* grows best in a half-sunny position planted in a loamy soil. It makes long, stout stems, which in time reach a considerable length. If too long to be earthed-up with soil, the tops can be taken off and potted up, when they will readily make roots if treated as cuttings.—W. I.

FORTHCOMING EVENTS.

May 13.—United Horticultural Provident and Benefit Society's Committee Meeting.

May 14.—Royal Horticultural Society's Meeting and Tulip Show. Seventh Masters' Memorial Lecture at three o'clock by Professor I. Bayley Ballour, F.R.S., V.M.H., on "Gardening and Drought." Devon and County Show at Plymouth (three days).

May 15.—North of England Horticultural Society's Meeting at Leeds. Lecture on "Electricity in Relation to Horticulture," by J. H. Priestly, Esq., B.Sc. Paris Spring Show (eight days).

May 16.—Manchester Orchid Society's Meeting.

THE ROSE GARDEN.

THE BEST BEDDING ROSES.

TO many who cultivate Roses purely as garden flowers, the article on bedding Roses by Mr. H. R. Darlington will be the most interesting of the many good things to be found in the National Rose Society's Annual for 1912. This Annual is, in our opinion, the best the society has ever published, and this is saying a great deal when we consider the interesting and instructive numbers that have preceded it.

For the purpose of the article now under notice, the secretary, Mr. E. Mawley, solicited the opinions of experienced rosarians, both amateurs and trade growers, on the subject. The lists thus obtained were handed over to Mr. Darlington for classification, and the two dozen which obtained the most votes are arranged in sections, according to

Rose we would, in company with Dr. Williams, prefer General Macarthur, especially for autumn display. With us it has always proved much the freer blooming of the two, and its habit, constitution and fragrance are excellent. True, its flowers are not so perfect in shape as those of Richmond, but this is not a great drawback in a bedding Rose. On the other hand, he does not think much of Fran Karl Druschki as a bedding Rose. Certainly it is not one for a small bed, but it is excellent for a white display when planted in a large bed and its long growths pegged down. Owing to its lack of fragrance, it is a Rose that we would not grow in quantity in any form.

As already stated, this article is only one of many that are to be found in this excellent Annual, which reflects the greatest credit on the secretary, who has acted as editor, and his contributors. Copies can be obtained by non-members of the society, price 2s. 6d. post free, from Mr. E. Mawley



AN INTERESTING ITALIAN COWSLIP (*PRIMULA PALINURI*).

their height. These are as follow: Dwarf—Jessie, Fabvier, Cecile Brunner, Mme. Jules Grolez, Mme. Ravary, Mrs. W. H. Cutbush, Augustine Guinoisseau, Comtesse du Cayla and Richmond; medium—Ecarlate, Gustav Grunerwald, Prince de Bulgarie, Joseph Hill, Lady Ashtown, Mme. Abel Chatenay, Caroline Testont, Mrs. E. G. Hill, Mme. Léon Pain and Pharisäer; tall—Irish Elegance, Grüss an Teplitz, La Tosca, Fran Karl Druschki and J. B. Clark. Mr. Darlington points out that some of these varieties were placed in one section and some in another by the various compilers of lists, so that he had to base his own judgment on plants growing in his own garden last year.

In the detailed descriptions given of each variety, Mr. Darlington makes it clear that some of the varieties included are not the best for the purpose, and, indeed, it is doubtful if the list is one that any single grower would consider the best. At the same time, it is exceptionally valuable as a guide, inasmuch as it is the combined opinions of the best growers in the country. Nevertheless, everyone will not agree with Mr. Darlington's ideas of these Roses. Of Richmond, for instance, he has a very high opinion; but for a bedding

Rosebank, Berkhamsted. It is a book that no Rose-lover ought to miss.

THE ROSE GARDEN IN MAY.

By this time Roses should be in active growth, and one of the main things is to keep them healthy and clean. Unfortunately, the extreme changes of atmosphere so frequently experienced at this date have a bad effect upon young Rose growth, while they also seem to increase the plague of insect foes.

Mildew has already been dealt with, but the free use of Cyllin Soft Soap and the other remedies advised for mildew will also have a great tendency to check insect enemies. Among the first of these are the Rose maggot and caterpillars. Wherever one finds the young leaves curled unnaturally, it is almost certain to be the work of some grub or caterpillar. I do not know of any more effectual remedy than hand-picking in this case, and if persisted in for a time at first, this will generally be successful. But one must begin early, or the mischief is so great that the bulk of one's first crop is spoiled.

A little observation will soon enable any grower to tell at a glance whether the curling of young

foliage is natural or caused by the leaf-rolling maggots. Nor must one go to work in a rough manner when searching for these troublesome pests, as they are wonderfully sensitive to touch and vibration, often slipping away from one shoot while you are busily hunting over another. The least disturbance causes them to forsake their hold and drop to the ground by means of a silken thread, either ascending by this when all is quiet once more or crawling up the stems should their line of communication be broken. I have found it a good plan with standards to tap the stem smartly and look out for the enemy as they seek safety by falling. But you must be quick in this work. Our feathered friends are very useful here, and I have often seen the much-maligned sparrow busy among both maggots and green fly.

Syringing with any of the insecticides I will mention later is also very distasteful to these maggots, and will eventually stop them. But this is not often done until after much mischief has resulted, so I prefer early hand-picking combined with a free use of the syringe.

Perhaps I may be allowed to digress a little here and advocate the much freer and earlier use of reliable washes than is generally the case. I am convinced we might escape much harm by syringing, even before any apparent cause for such exists. Prevention being better than cure may well be applied here.

Our main insect enemies just now are maggots and green fly. Neglect these for a short time, and they will assuredly take the chief charm from the first and main crop of bloom. If it has to be done, why wait until the effect of applied remedies is almost nil? Numbers of reliable insecticides are offered in these pages, so one can choose for himself. I do not propose extolling one over another; all are undoubtedly good, or they would not pay for repeated advertising. But I would like to point out that Cyllin Soft Soap at the rate of 1oz. to a gallon of soft water is perfectly safe, cheap, and may be used freely enough to allow of thoroughly cleansing the foliage. Short strokes with the ordinary syringe or a good stock of elbow-grease behind the Abol Syringes will work wonders. Do not imagine you are window-washing, however; but afford short, sharp jets of spray, and see that the bottom of the foliage is also reached by any insecticides.

Under glass we are not usually troubled with maggot, except in the case of a few Hybrid Perpetuals having especially sweet foliage; but thrip and red spider will put in an appearance should the atmosphere be allowed to become unduly dry for a short time. Much of the health among Rose foliage is secured by judicious moisture in the atmosphere as well as at the roots. We have a great aid when combating insects under glass in the facility afforded for fumigation, which could not be carried on in the open. On no

account overdo the fumigation. If the first application is not entirely successful (which it seldom is), fumigate again the following night, but do not increase the strength of the fumes much. A little thought will show the folly of too extreme measures. You cannot well wash or fumigate sufficiently strong to kill insects and eggs at the same time. It is the newly born or hatched insects that show life in the morning, and a morning syringing is very effective here. A slight fumigation, followed by a good syringing in the morning, and this done on two or three successive nights, will have a wonderfully cleansing effect without the risk of injury so many court by using stronger

many Roses has been commented upon in our pages on various occasions, we do not ever remember the subject being dealt with so fully as Mr. Darlington did on the occasion in question.

Unfortunately, he based his remarks almost entirely on Rose species and their hybrids, many of which are not suitable for cultivation by the average amateur, though, where plenty of space is available, there is no reason why such as rubrifolia, sericea, sinica Anemone, Brunonis and the Macartney Rose should not be grown. Indeed, their inclusion would add very considerably to the interest and beauty of the garden.

The lecture was, however, of considerable value to the amateur, inasmuch as it opened up the whole question of the cultivation of Roses as ornamental shrubs from the standpoints of flowering, handsome foliage and artistic fruits. As those who cultivate Roses on an extensive scale know, there are a great many varieties which come under one or more of these headings, and a number of these were mentioned by Mr. Darlington as well as by those who took part in the subsequent discussion. Thus in the climbing section the lecturer mentioned Alberic Barbier, Aimée Vibert, Tea Rambler, Ariel and American Pillar as some of the best foliage Roses, and, of course, they are all good as flowering plants. The Sweet Briars also Mr. Darlington wisely drew attention to, and undoubtedly these should be planted more freely than they are for the sake of their fragrant foliage.

In the discussion which followed, Mr. James Hudson, V.M.H., gave the names of a number of good garden Roses that might be grown as large bushes either on account of their free flowering or ornamental foliage. Among these were Conrad F. Meyer, Noella Nabonnand, Frau Karl Druschki (which, he said, could be had in flower early if the growths were merely thinned out and not pruned) and Zepherin Drouhin. Mr. George Laing Paul advised the crossing of the Macartney Rose with wichuraiana, a cross which he thought would yield a good new race of Roses.

At the present time the shoots and foliage of many of the Hybrid Tea and other dwarf Roses are very beautiful. In our own garden we are particularly pleased with Margaret, which has intense crimson foliage and shoots; White Killarney, stems and spines red and foliage green, tinted red; Miss Cynthia Ford, almost similar to the foregoing; General Macarthur, deep red; Zepherin Drouhin, a charming shade of light red; Grüss an Teplitz, green, tinted red; Alberic Barbier, glossy green; and Marquise de Sinety, deep rose. This question, which is often overlooked, is of the greatest interest to rosarians, and we should be pleased to have short notes about other beautiful-foliaged varieties from our readers.



THE YELLOW-FLOWERED CHERRY, PRUNUS SERRULATA FLORE LUTEO PLENO. (See page 229.)

measures, whether in fumicides or washes. It is steady, safe and early action that tells in keeping Roses clean. A. P.

THE DECORATIVE VALUE OF ROSE FOLIAGE.

A NEW aspect in the cultivation of Roses for decorative purposes was brought before the members of the Horticultural Club at their meeting last week, when Mr. H. R. Darlington, a well-known amateur rosarian and a vice-president of the National Rose Society, lectured on "The Rose as a Decorative Plant," with special reference to the foliage. Although the beautiful foliage of

TREES AND SHRUBS.

THE LABURNUMS.

THE two commoner kinds of Laburnum occupy, with the double-flowered Thorns, probably the most important position among the smaller flowering trees, for there are few places where they will not grow, and it rarely happens that they fail to flower well. Moreover, they are inexpensive and within the reach of everyone, for a nice young tree may be obtained for a shilling which will doubtless blossom the first year after planting. Light or heavy soil is suitable, and as fine examples may be noted in northerly parts of Scotland as in Southern England.

Species of Laburnum are readily increased from seeds, which are ripened in quantity most years, but the numerous varieties have to be grafted on to stocks of the common kinds. Although the Laburnums are most satisfactory as free-grown trees, some people train them into arches and weave the young branches so as to form an arbour. They stand the treatment well, but plants of climbing habit would look more in place.

Although the wood of the Laburnums does not occupy a prominent position among commercial timbers, it is very ornamental and takes a high polish. The pale yellowish sapwood offers a decided contrast to the heart-wood, which is dark brown or almost black. It is sometimes used for turning and for inlaying. The kinds available for planting are as follow :

Laburnum alpinum, or the Scotch Laburnum, is a native of Europe, growing at least 20 feet to 25 feet, and forming a shapely, bushy-headed tree with three-parted leaves considerably larger than those of the common Laburnum. It blossoms towards the end of May or the beginning of June, two or three weeks later than *L. vulgare*. Nurserymen have selected a number of more or less distinct forms for varietal names. Some of these are: *autumnalis*, which often produces a second crop of flowers in autumn; *biferum*, with divided leaflets; *fragrans*, with sweet-scented blossoms; *hirsutum* and *pilosum*, with hairy leaves.

L. vulgare, or the Common Laburnum, also a European tree, is probably the most widely grown of all flowering trees. Though often met with from 15 feet to 18 feet in height, it not infrequently attains a height of 25 feet, and sometimes more. Its racemes of yellow flowers are familiar objects during early May, and there are few gardens which do not contain one or more trees. As is the case with the Scotch Laburnum, it possesses many varieties. These differ from the type either in habit, size of inflorescence or shape of leaf. The more showy ones are *Alschingeri*, *Carlieri*, *jacquinianum* and *linneanum*. *Folius aureis* has yellowish leaves; *involutum*, *monstrosum cristatum* and *quercifolium*, more or less deformed or abnormal foliage, neither one being of any decorative value; while *sessilifolium* is interesting on account of its leaves often being sessile, the peculiarity, however, not always being constant.

L. caramanicum is a curious shrubby plant from Asia Minor, which more closely resembles a *Cytisus* than the ordinary Laburnum. It has small three-parted leaves, and bears its yellow flowers in terminal inflorescences about the end of August and early September. It can hardly be recommended as a plant for general cultivation.

L. Adamii has commanded a great deal of interest ever since its appearance upwards of eighty years ago. It originated as a graft hybrid between *L. vulgare* and *Cytisus purpureus*, the former having been used as a stock for the latter. The hybrid possesses the peculiarity of bearing two distinct kinds of branches and leaves and three kinds of flowers. Ordinary Laburnum branches and leaves, and branches and leaves similar to those of *Cytisus purpureus* are borne, while racemes of purple and racemes of yellow flowers and ordinary flowers of *C. purpureus* are produced.

istic of being quite distinct in colour from any variety in cultivation. That it is free-flowering may readily be gathered from the young but profusely-flowered tree shown in the illustration on page 228. This tree is growing at Kew, where it was in full flower for the greater part of April. The botanical designation of this obscure variety, it should be added, is *Prunus serrulata flore luteo pleno*. We prefer, however, to call it the Yellow-flowered Cherry, and as an interesting and beautiful tree it should be represented in all gardens where trees and shrubs are treasured.

THE FLOWER GARDEN.

THE AMERICAN WOOD LILY.

TRILLIUM GRANDIFLORUM is a little unfortunate in that it possesses a superfluity of common



THE PINK-FLOWERED WOOD LILY, *TRILLIUM GRANDIFLORUM ROSEUM*, IN THE ROCK GARDEN.

L. Parksii is a hybrid between *L. alpinum* and *L. vulgare*. In general appearance it most closely resembles the former. Its most prominent feature is its long inflorescences, which sometimes attain a length of 1 foot or more. This peculiarity is shared by a variety named *Latest* and *Longest*. Inflorescences of this 17 inches in length have been measured.

L. Watereri claims the same parentage as *L. Parksii*. It may be described as a glorified Scotch Laburnum. The inflorescences are borne with the greatest freedom, and are larger than those of either parent. D.

THE YELLOW-FLOWERED CHINESE CHERRY.

ALTHOUGH introduced nearly twenty years ago, the yellow-flowered Chinese Cherry still remains a little-known and rare flowering shrub. The flowers, which are double, are light yellow, tinted buff, and the variety possesses the unique character-

names, for not only is it known as the American Wood Lily, but also as Wake Robin, Indian Shamrock and Three-leaved Nightshade. It is a native of North America, and belongs to the Natural Order Liliaceae. For naturalising in shady places it is quite well adapted, and when grown in the natural leafy soil of old woods it increases rapidly. A deep and well-drained bed of peaty soil is likewise suitable for this plant. The flowers of the type are very chaste and snow white, fading to a pale rose with age. The variety shown in the illustration is that known as *T. grandiflorum roseum*, the flowers being of a rosy hue, becoming darker after expanding.

SWEET PEA NOTES.

Training.—Whether the plants are under culture for the production of blooms up to exhibition standard in the keenest competition, or whether they are wanted to produce almost unlimited supplies of flowers for beautifying the garden and

the home, a considerable amount of training is demanded. The haphazard system of throwing in the seeds, ramming in the stakes and trusting to a beneficent Providence was all very well in the good old days, which no one among us wants to see again; but it will not do now. The judicious reduction of main shoots and the suppression of laterals are undoubtedly advantageous from every point of view, and no grower worthy of the name will begrudge the time required to carry out the details. A tie here and there, too, will often spell the difference between complete satisfaction and partial failure, and must, therefore, be given according to judgment.

Feeding.—The tendency is undoubtedly to commence this too early in the season. If the soil is thoroughly worked to commence with, and rotten natural manure is incorporated at the same time, with some artificial fertiliser two or three weeks in advance of sowing or planting, there should be an abundant supply of food in the ground to last the plants until the buds are well advanced, and until that stage is reached special feeding should not be attempted. The practice of pouring strong liquid manure on the soil before the roots have become much more than comfortably established is sure to lead to sappy growth if the plants have the power to imbibe the food, and if they have not, the probabilities are that it will sour the ground and thus ruin the roots. When the plants are in full vigour, by all means feed if it is necessary, but let the manure tub alone until it is quite certain that the supply of food in the soil is not sufficient to meet the proper requirements of the plants.

Surface Cultivation.—With a view to conserving the moisture and the food in the soil there is nothing equal to incessant surface stirring. Given a good depth of perfectly friable soil that is moderately firm, it is astonishing how long the supply of water will last, and this, of course, means that the plants will continue in steady growth. The thing is to prevent any loss of moisture, and to this end hoeing or pointing over with a fork is resorted to. As far as the maintenance of excellent health in the plants is concerned, this is far preferable to constant watering, and I am quite sure that if more surface cultivation were done and the water-pot were used less, the results achieved would be far more satisfactory from every point of view. It is well, when this task is in hand, to give a fall towards the stems in light soils, and slightly from them in heavy, wet ground. This must be accepted as a broad, general principle, which will vary somewhat with the particular conditions of each garden and the weather which prevails at the time. Anyway, no matter what else may be done, never fail to keep an inch of fine soil on the surface.

Mulching.—No one can question for one moment the immense benefits which healthy, vigorous plants derive from mulchings of manure; but it is possible for harm as well as good to accrue. It is rarely wise to mulch before the end of the present month, as the tendency of the dressing is then to prevent the free admission of fresh air into the ground; but if the material used is kept constantly open by stirring with a fork, this danger can be reduced. At the end of May or the beginning of June, however, the ground will have become nicely warmed, and a thick covering of short manure



THE NEW ALPINE AURICULA ROXBURGH.

will be excellent, since an appreciable amount of food will be provided at a time when the plants have plenty of power to secure the benefit of it, and at the same time the ground will be kept cooler, while there is the further great advantage of preventing the loss of food by capillary attraction. In some degree hoeing takes the place of mulching, but it can never be quite equal to it, because no direct food is then provided. It is, however, impossible to overestimate the value of hoeing, and from now to the end of the month at least the surface soil must be hoed frequently.

HORACE J. WRIGHT.

A NEW ALPINE AURICULA.

THE new Auricula Roxburgh, as shown by Mr. James Douglas, is a very fine addition to the alpine section. A casual glance at the accompanying illustration gives one a good idea of the stout umbel and bold head of flowers that this variety is capable of carrying. Moreover, the healthy appearance of the foliage in particular bears evidence of a sound constitution. A closer inspection of the illustration reveals a certain amount of refinement in the flowers, which are of good size, nearly two inches across, shaded purple, and merging to blue at the margin, while the creamy white centre is remarkably well defined.

HARDY PRIMULAS IN DIFFERENT LOCALITIES.

It is interesting to note how the same plants behave differently in different localities. I refer to Mr. Malby's instructive article, "A Beautiful Rock Garden Primrose," pages 193 and 194 of your issue for April 20. The tendency to raise themselves above ground-level is common to a certain extent in a great number of (perhaps mostly alpine) Primulas, and I think Mr. Malby is correct in assuming it to be Nature's method of guarding the plants from being buried by the annual deposits of grit and humus which are washed down so plentifully from the mountains every spring.

Strange to say, *P. rosea*, which Mr. Malby mentions as typical of this tendency to grow out of the ground, behaves quite differently in my garden. Twelve years ago I planted, near the margin of a small pond formed by an artificial streamlet, six plants of *P. rosea*, the seedlings of which have since then not only encircled the whole of this little basin, but have also travelled up and down this rill to such an extent that I am now obliged to carefully remove the flower-stalks before the ripening of the seeds, lest every other kind of plant-life along the water-course should be smothered. After flowering, *P. rosea* produces an enormous growth of leaves, which during winter die down right to the hearts of the plants, and on removing the withered leaves in the early spring

nothing is observable of the plants having raised themselves above the soil. Last year I lifted one of the original plants, and we had to use considerable force with two four-pronged forks before being able to bring up the clump, which consisted of hundreds of rosettes.

P. farinosa has flourished along the same rill of water all these twelve years without requiring to be looked after. The old plants perish and thousands of seedlings take their places in turn, shifting for themselves. In the soaking, spongy bogs where *P. farinosa* grows hereabouts, the little plants often hang through the winter quite

suspended among the hard grass, their bare roots only reaching down to the water. Where they grow on drier soil, they rest closely on the ground with their roots in the soil. *P. marginata* is the worst here for growing high. I cut off the tops every second year, striking them afresh, which they do very readily.

The usefulness of this rising above ground may be estimated by the fact that species which retire below or half beneath the surface, like *P. cockburniana* and *P. cashmeriana*, are much more liable to suffer from wet winters, although others, again, like *P. Sieboldii* and *P. sikkimensis*, which disappear entirely below the surface, do not seem to become endangered thereby.

In connection with the tendency under notice, I have observed a most interesting fact in the mountains. On Mount Rofan (Achousee, Tyrol), 2,300 mètres above sea-level, *P. minima* grows abundantly in several distinct positions. On a steep slope near the summit may be noticed a great number of what look from a distance like so many old molehills grown over with grass. On nearing these, however, you find their tops entirely grown over with firm, close carpets of *P. minima*. These little hills are sometimes over six inches in height. In another position on the same mountain, a little lower down, I saw this *Primula* growing on level ground, covering quite extensive stretches, but without the slightest sign of any elevation above the surrounding alpine turf. Here *P. minima* forms, together with *Azalea procumbens*, a perfectly smooth surface.

The deduction to be drawn from this difference in the manner of growth must obviously be this: that in the first case the soil on the steep slope is being washed away around the patches of closely-matted rootwork of the *Primula*, be it ever so little every year, while on the level ground this agency is not at work. How old the plants on these little hillocks may be, who can tell? They must, however, be of great age, considering that these mounds are not surrounded by loose *débris*, but by a firm carpet of short grass, growing in that black, greasy, alpine humus we see everywhere in the mountains, and which the dense grass covering effectually protects from being washed away to any great extent every year. If the rising out of the ground would be the cause of these hillocks being formed, why should not the same process also take place on the level turf? E. HEINRICH.

Planegg, near Munich, Bavaria.

WHITE FRITILLARIES.

It can hardly be claimed that the *Fritillarias* are popular garden flowers, although they include among them many species and varieties of considerable beauty. Some of the finest are difficult to retain in our gardens, while others, again, have an appearance more curious than attractive. Yet those who have studied these plants are eager to assert that they have much real beauty, and that they would not like to be without some, at least, of these bulbous plants. Our native *Fritillaria Meleagris*, the Guinea-hen Flower or Snake's-head Lily, as generally seen, is more singular than attractive, although it has many points of beauty in its curious chequering and its different hues. This singular appearance is not, however, to be asserted of the white varieties, which are really beautiful with their shapely, pendent, bell-shaped flowers of pure or creamy white. A small group of one of these white *Fritillaries* grown in my rock garden is represented

in the illustration, and is one which everyone admires who sees it here. It is, I think, the prettiest of the four different types of *F. Meleagris* with white flowers which I cultivate here. The habit is finer than in the others, the plants being taller and more graceful, while the flowers are of a delicate waxy white texture and colour. This form came to me from a Scottish garden, where it had been for many years.

Another handsome variety with white flowers has these purer than that illustrated, but the bells, though larger, are broader and on shorter stems. Still, it is very ornamental; it comes a little later than the preceding. Its flowers are very shapely. There is also in my garden another *Fritillaria* with very white flowers, but of still dwarfer habit, and having the segments more pointed and not so handsome-looking as in either

should not be kept any longer out of the ground than can be helped. From 3 inches to 6 inches is a good depth for *F. Meleagris* and its varieties. *Dumfries.* S. ARNOTT.

COLOURED PLATE.

PLATE 1451.

CHINESE PRIMULAS.

EACH year is marked by some improvement among these ever-popular greenhouse flowers. It may be a new shade in colour, an increase in size of petal, or even a more floriferous habit. Some day—and it may not be far off—the high-water mark of perfection will be attained and further improvement will seem impossible. But



WHITE SNAKE'S-HEAD LILIES OR FRITILLARIES IN A SCOTTISH GARDEN.

of the foregoing. A further variety is *F. Meleagris contorta alba*, a quaint-looking flower of different habit. In this the flowers are sometimes twisted—hence the name *contorta*—but this is not always visible. The flowers are on dwarfer stems than in the first two and are long-petalled. They are of very thick texture and of a clear good white.

Although *F. Meleagris* likes a moist place, these white forms (and the others, for that matter) will thrive and flower well in drier soil. The group here figured is at the base of a rockery, and is only about six inches above the ground-level. I have other *Fritillarias* of the same species higher up, and I find they look most ornamental at, or nearly at, the level of the eye. Bulbs should be procured as early as possible in autumn, and

at present *Primulas* are grown in thousands by Messrs. Sutton and Sons at Reading, and, in such skilful hands, who can tell what improvements may yet be wrought? House after house was bright with these charming flowers when we made our visit in the dull days of February. The varieties are grown in distinct batches, each colour kept rigidly to itself. If one plant should show a variation, however slight, from its neighbours, it is kept under close observation, and should it turn out to be an improvement on those already grown, it would be saved for seed for future trials. So carefully are the various stocks selected and guarded that each may be relied upon to come true from seed.

The Famous Duchess Strain.—The turning-point in the development of the large-flowered

Primula sinensis seemed to have been reached when, about ten years ago, Messrs. Sutton created quite a sensation with their remarkable introduction *The Duchess*, which still holds its own as one of the most distinct and beautiful *Primulas* yet raised. The flowers, borne in a large truss just above the foliage, are pure white, with a unique zone of bright rosy carmine surrounding a clear yellow eye.

From a series of crosses made with *The Duchess Primula*, Messrs. Sutton and Sons have evolved a hybrid strain, the flowers of which vary from bluish white to crimson, all having the characteristic zone of deeper colour around the centre.

Giant Primulas.—This is the title given to a modern development remarkable not only, as the name implies, for the size of flower, but also for the substance of petal. So large are the individual flowers that a five-shilling piece is quite lost when placed against one. White, pink and crimson, with intervening shades, are the colours represented in this section.

Double Varieties.—It is interesting to observe that with practically all the standard varieties, such as *The Duchess*, *Pink Beauty*, *Salmon Pink*, *Crimson King* and *Reading Blue*, Messrs. Sutton and Sons have secured the double forms, and that is not all, for, without exception, each double variety will come true to name from seed. There are times when the flowers of the double forms are partially hidden by their foliage, and this little failing may be obviated by placing the plants on the greenhouse shelves, when the flowers will be raised above the leaves, and will thus be brought out to their full beauty.

Star Primula (*P. stellata*).—This elegant strain, introduced by Messrs. Sutton and Sons in 1895, has attained a high position in popular favour. The plants are very floriferous, and for conservatory and general decorative work they are indispensable. It should, perhaps, be pointed out that the flowers differ from those previously referred to, in that they are much smaller and plain edged. Moreover, they are borne tier upon tier in three or four whorls, whereas *P. sinensis* generally carries the flowers in one huge truss. Every shade of colour found in the larger type is represented in *P. stellata*. The accompanying coloured plate represents part of a house of these star-flowered *Primulas* at Messrs. Sutton's trial grounds at Reading, and has been prepared from a coloured photograph taken by their photographer.

Among other *Primulas* grown at Reading, that dainty species, *P. malacoides*, finds a congenial home. Of light habit and flowering as it does in winter and spring, it is a suitable companion to the yellow-flowering *P. kewensis*. The latter has fragrant blooms, reminding one of the scent of *Cowslips*, and since it is yellow, it supplies just the colour that is wanting in the flowers of *P. sinensis*. So far no crosses of this hybrid *Primula* have been raised; but in the hands of the skilful

hybridists at Reading, who can tell what future is in store for the ever-popular greenhouse *Primulas*?

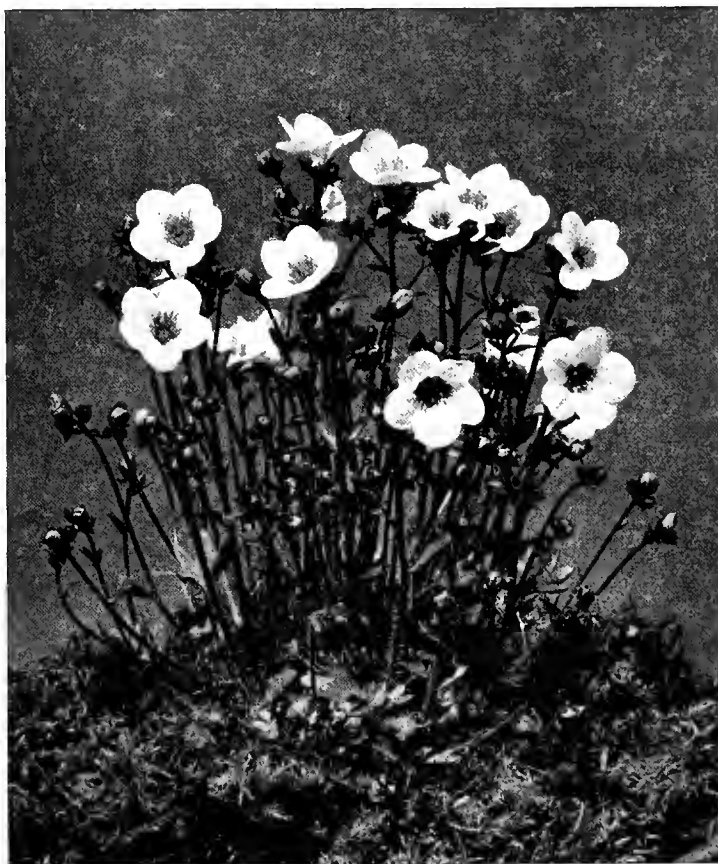
NOTES ON TULIPS.

THE last day of April saw as bright and as beautiful a show of flowers as the Royal Horticultural Hall at Westminster has ever held. To this the magnificent displays of Cottage and Darwin Tulips from Sir Randolph Baker and Messrs. Sutton, Barr, Wallace, Bath, and Cartwright and Goodwin contributed in no small degree. Tulips are wonderfully bright things, and more than hold their own for gorgeous colouring against any flower that may be pitted against them. It must have been their brilliant hues that instantly took

of Darwins and many Cottage varieties have advanced this season, and, on the other hand, I know that enterprising dealers at home are quietly picking up and planting all the best varieties. Now, as these for the most part increase very quickly, I do not see how there can be any substantial rise; if anything, it will be the reverse. Retail prices will fall. I have laboured this point to indicate that if a certain sum is put aside for the purchase of these Tulips this year, the same amount will probably buy more and not less in 1913, and so on.

Visitors to the show were able to select for themselves, but it may be useful to others to mention some that might well be given a trial. Such varieties as Mr Farncombe Sanders, Clara Butt, Pride of Haarlem, Rev. H. Ewbank, Baronne de la Tonnaye and White Queen among the Darwins, and Mrs. Moon, *gerneriana spatulata*, Bouton d'Or, Fairy Queen, *retroflexa*, I a Merveille and Picotee among the Cottage, are too well known to need description or commendation.

Nearer planting-time selections may be valuable. I think I can now best occupy my remaining space by giving a few of the less-known or newer ones which might be tried. Two varieties received awards of merit, and one was passed on to the scientific committee with a recommendation for a botanical certificate. (1) Grenadier, which was shown by Mr. W. T. Ware, but before the afternoon was over it had changed hands, and Messrs. Wallace and Co. of Colchester are at the present time the proud possessors of this brilliant flower. As I hope there will be a picture of it in next week's GARDEN, I will reserve my description until then. (2) Velvet King is a fine tall, purple maroon. It is one of the best of all the tall, large, dark ones. (3) Sensation, the variety referred to the scientific committee, is, in the catalogue words, "a great novelty." It is the first purple-marked or bybløemen "Parrot" ever put into commerce. It appeared some years since in Holland as a sport from a Darwin variety called Queen of Spain. An extremely taking flower is Moonlight. It is a pretty pale shade of



THE NEW WHITE SAXIFRAGE MRS. J. F. TOTTENHAM.
(See page 235.)

the gardening world of Central and Western Europe by storm when, in the middle of the sixteenth century, they were first brought from Constantinople and the East. I often try to picture the general run of the denizens of cultivated gardens about 1550, and then to imagine what I would have said and felt had I suddenly walked into one full of Tulips. To-day we have tens of thousands of species and varieties which were unknown then, but, I ask, which of them for pure unadulterated Oriental magnificence can eclipse the Tulip?

Colour is an essential part of a modern English garden. The importance of the Tulip lies in its being able to give this desirable adjunct at a comparatively low price and at a time when something was wanted. I am told that the wholesale prices

of canary yellow, with a real canary colour inside. It has a long-shaped bloom and is decidedly on the early side. It should make a handsome border planted alternately with Scarlet Emperor. A dark Darwin new to me was Bacchus, a large, egg-shaped plum purple self. This was exhibited by both Messrs. Barr and Sutton. Marie, a lovely silvery purple, was shown by Messrs. Wallace, and Julie Vinot, a good rose and pink, by Messrs. Cartwright and Goodwin. Both these are varieties to note. Among the Cottage section, Clio or Bronze Queen was in several collections. It is biscuit brown in colour and a fine strong grower. Oriana, a sort of shaded ruby red; Amber Crown, amber and apricot; and Cassandra, cherry rose, were among the others that caught my eye. It was a great day for Tulips. JOSEPH JACOB.

GARDENING FOR BEGINNERS.

TRANSPLANTING SEEDLINGS RAISED IN A COLD FRAME.

ON this page in the issue dated March 23 advice on the sowing of seeds of half-hardy annual flowers was given, and the promise made that the transplantation of the seedlings would be dealt with in due course.

As these have now reached the stage when this work is necessary, a few hints on the best way to do it will be of service to the beginner. In the issue mentioned above, the drainage of the seed-boxes was dealt with fully, a sectional illustration of a box properly drained being shown. Thorough drainage is equally as necessary for the seedlings when they are transplanted, and for this reason the boxes or pans used for the purpose ought to be 3 inches or 4 inches deep, and each should have a number of good-sized holes in the bottom. Over these broken pots, or "corks" as the gardener terms them, should be placed, concave side downwards, next a layer of rough soil and, finally, the sifted material, which must be made firm. All boxes or pans must be quite clean.

The Best Soil.—Although amateurs often have but little choice in the selection of soil for their



1.—ASTER SEEDLINGS BEFORE BEING TRANSPLANTED. ON THE LEFT THEY WERE SOWN TOO THICKLY.

better and do not suffer so much as when the soil is on the dry side. In the March 23 issue the necessity for thin sowing was emphasised, and for the purpose of bringing this home forcibly, one

are on the one hand, and bow sturdy on the other. In Fig. 2 some of the sturdy seedlings from the thinly-sown half of the box are shown separately. To lift the seedlings in readiness for transplanting, there is nothing better than an ordinary wooden label, as shown in Fig. 2. If this is thrust well under a cluster of seedlings, they can be lifted out bodily, as depicted in the centre of Fig. 2. This avoids injuring the roots, and the individual seedlings as shown can be taken out with practically all their fibrous roots intact—a not inconsiderable item in the successful cultivation of Asters, Stocks, Zinnias and similar flowers.

Distance to Transplant.—This may vary somewhat, according to the space at the disposal of the cultivator. If I had unlimited room, I would place the seedlings 3 inches apart each way; but at this season cultivators, and especially beginners, have none too much room under glass, and consequently 2 inches must suffice. The actual repanting should be done with the blunt-pointed dibber shown in Fig. 2. This is thrust into the soil and withdrawn, the roots of the seedling dropped into the hole, and the dibber again pressed in beside it, but so that some soil is between the roots and the dibber. This soil is gently squeezed to the roots, so that the latter are made quite firm. Fig. 3 shows a box of seedlings ready for the frame.



2.—SEEDLINGS LIFTED WITH A LABEL. NOTE THE CLUSTER OF ROOTS THAT EACH HAS. THE POINTED STICK ON THE LEFT IS USED FOR TRANSPLANTING.

seedlings, every endeavour should be made to get it as good and sweet as possible. A mixture that will suit most kinds of half-hardy annuals is composed of decayed turfy loam two parts, leaf-soil or Coconut fibre refuse half a part, well-decayed, rather dry manure half a part, and coarse sand half a part. Failing the decayed manure, use a rather smaller proportion of Hop Manure. All the ingredients should be well mixed and passed through a sieve with a 1-inch mesh, retaining the coarse portion for placing over the corks as advised above. Avoid filling the boxes or pans too full; when made firm the soil ought not to come within half an inch of the edge of the box.

Lifting the Seedlings.—Having prepared the receptacles, our next duty is to give attention to the seedlings. The soil in which these are growing should be well watered an hour or two previous to the transplanting or pricking off, as they lift

half of the box shown in Fig. 1, *i.e.*, the left-hand side, was sown thickly, and the other half thinly. It will be readily seen how crowded the seedlings;



3.—SEEDLINGS TRANSPLANTED SEPARATELY. GROW IN A COOL TEMPERATURE FOR PLANTING OUT EARLY IN JUNE.

Subsequent Treatment of the Seedlings.—As soon as a box is planted it should be labelled, given a light overhead watering with a rosed can and stood in a cold frame. This should be kept almost closed for three or four days and the seedlings shaded from bright sunshine. By that time they will have made new roots, and from then onwards more air can be given, so that by the second week in June a batch of sturdy, well-grown if rather late plants will be available for planting outside. They will give better results than similar kinds raised in heat.

P. H.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.
The Flower Garden.

Aubrietias.—As the flowers pass their best the plants may be trimmed over and made tidy. The young growths that ensue will be found to strike freely at this season if inserted in a frame and kept close, and will make nice plants for placing out at the end of the year.

Alpine Phloxes.—These, too, may be propagated from cuttings as advised for the above.

Myosotis.—Select a shady position for sowing the varieties for next season's spring bedding. Draw shallow drills about six inches apart and sow thinly. A practice some people adopt, and one that answers well, is to leave a plant or two in the ground to seed naturally, when the seedlings will appear round the plant. When large enough, transfer to a piece of ground that has been well prepared and plant 4 inches apart.

Bamboos.—These transplant well at this season of the year if a little care is taken with them in dividing and replanting. A position that is sheltered from the cold easterly and north-easterly winds should be selected, such as a dell, for instance; at any rate, for the more tender species. The ground should be treated liberally and deeply worked, adding plenty of leaf-mould and manure. For woodland walks these Bamboos are extremely effective; and so are some of the more graceful varieties, such as *Arundinaria gracilis* and *A. nitida*, for planting as specimens on the lawn or beside water, when it is advisable to give temporary protection in sharp weather.

Shrubs.—A few of the very best now in flower to note for planting later are *Exochorda grandiflora* (the Pearl Bush), *Cytisus kewensis* (creamy white), *C. purgans* (golden yellow), *Prunus Pseudocerasus* and variety *J. H. Veitch* (the latter a beautiful tree), *Pyrus Malus floribunda* and variety *atrosanguinea* (wreathed with blossoms), *Berberis Darwinii* and *B. stenophylla*.

Orchids.

Dendrobiums.—Now that the majority of these are making their growths, they will need the warmest and lightest end of the house and plenty of humidity to keep them moving. They do well suspended to the roof, so that the maximum amount of light reaches them. When watering, lift the plant down and immerse the receptacle in a pail of chilled water.

Cattleyas.—Many of the spring-flowering ones are making a rich display. To preserve the flowers as long as possible, remove the plants to the coolest end of the house and keep a little drier.

Watering.—Those plants that were potted up, such as *Calanthes* and *Cypripediums*, will, as the roots enter the new compost, require a little more water. Keep the stages, however, well damped, syringe in between the pots, and damp down the floor of the house in the evening.

Plants Under Glass.

Caladiums.—The large-leaved varieties, to show off their leaf-colouring to the best advantage, will need a thin, neat stick placed to each leaf and staked out. Shade from bright sun and continue to grow on in a warm house. As the pots fill with roots, assist with liquid manure-water and keep the surroundings thoroughly damp.

Schizanthus.—Make another sowing now for an autumn display, which, if potted on into 8-inch pots, will yield abundance of flower. The seed can be raised quite coolly, and the plants in another month stood out in the open. Never allow them to suffer from the want of water once they have become well rooted.

Coleus thyrsoides.—Insert cuttings of this plant now, which will flower early next year. The cuttings will quickly root in fibre in a warm pit, and when rooted can be potted up singly and grown in a warm house. Stop the plants twice to induce a bushy habit. When in flower, these will last a long time in a cool house, and produce a pretty effect interspersed with Maidenhair Ferns.

Salvias.—These must be shifted on as becomes necessary, and if attention to potting has to be delayed, help the plants by the addition of liquid manure-water. These, to form good bushy plants

for winter flowering, must be stopped twice more. Syringe the plants and admit plenty of air. In another month these may be stood out of doors.

Hardy Fruit Garden.

Watering.—The drying conditions of the weather throughout April have been very detrimental to trees that are newly planted in particular, and where possible these should have a good soaking of water at the roots, and immediately after a mulch applied. Syringe the growths frequently.

Raspberries.—Remove any suckers that appear between the rows by means of a fork, and remove weed-growth with the hoe. Give a mulching of rotten manure.

The Kitchen Garden.

Dandelion.—This makes a splendid addition, when forced, to the winter salad list. Sow seed now in shallow drills, selecting a piece of ground well drained and not too rich. When the seed germinates and the plants are large enough, thin out to a foot apart.

Endive.—Where this is required in the autumn, make a small sowing in drills about eighteen inches apart for the Large-leaved Batavian varieties, but for the Green Curled less space will be needed.

Turnips.—Make small successional sowings and cover with short grass-mowings, which are a good preventive of the fly. Hoe between the plants sown earlier frequently. In the event of a shower of rain, dust over with soot.

Radishes.—Make frequent small sowings now onwards wherever the space permits. Water the seedlings as often as possible to hasten the supply of succulent roots.

The Rose Garden.

Aphis.—Unless the growths are kept syringed occasionally, these, in the absence of natural dampings, will become badly infested with fly. Use a reliable insecticide according to the directions and a syringe producing a fine spray. On mild evenings or early mornings thoroughly wet the foliage. Give newly-planted Roses a good soaking of water, as dryness at the roots is one of the primary causes of insect attacks.

Rose Maggot.—Keep a sharp look-out for curled leaves, and press them between the thumb and finger.

Gaps.—Any that may be occasioned should be filled up with plants out of pots, carefully removing them.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Thinning Muscats.—It is a common experience for the berries of Muscat Grapes, though they seem to set, to fail to swell. Attention to this must be given when thinning not to thin severely at first.

Black Hamburgs.—It is better to let these grow without tying down until the shoots become hard enough to manipulate without snapping off at the junction with the old wood. Meanwhile the points may be stopped when they reach the length desired, and all the sub-laterals rubbed off as soon as they are large enough to handle. Many growers do not now allow any sub-lateral growth, but depend solely on the primary foliage to perform the functions of the leafage.

Melons.—Those in manure-heated frames will now grow freely, but it is still desirable to apply fresh material when the heat is on the wane. Only a few—not more than four—main shoots should be left on each plant, and the lateral growth persistently restricted before it makes much progress. It is the usual experience that red spider, which is the bane of Melons grown in frames, attacks the tender young leaves of laterals before attacking the early foliage. Moderate ventilation is better than much moisture in hot weather.

The Vegetable Garden.

Leeks.—Should the seedlings not make satisfactory growth a slight surface-dressing of a stimulating manure will cause them to make faster progress.

Early Peas.—Dwarf varieties in flower will pod much quicker if the tips of the haulm are pinched off. Only a portion should be treated thus, the unpinched plants coming in slightly later. In dry weather in light soil a few profuse waterings will be of much benefit.

Brussels Sprouts.—The earliest plants ought to be ready to transplant, rather small, if sturdy, plants being preferable to very large ones. I get the finest and hardest Sprouts from hard ground unmanured. The plants require ample space, 3 feet between the rows and at least 2 feet between the plants. Later batches growing in seed-beds should be examined, and the seedlings thinned if growing too close together.

Autumn Cauliflower.—This also will be forward enough to transplant. It requires much manure and ground that has been very thoroughly worked and pulverised. Three feet by 3 feet is none too much space to allow each plant. If possible, with a trowel transplant each plant with a ball of soil and thoroughly water in, finishing by deeply hoeing the interspaces.

The Flower Garden.

Hollyhocks.—Finish planting the latest of these. Old plants throwing numerous spikes may require to have these reduced in number, but a many-spiked Hollyhock is no mean object when in full flower.

Herbaceous Plants.—Not a few of these will have grown so tall as to need supporting, lest the stems be bent and twisted. A simple and efficient method is to tie a strand of strong string loosely round each. Recently-planted material will, however, need a stake, which, as a rule, need not be a long one. The foliage of such early flowers as Winter Aconite may now be cleared off, also the decaying flower-stalks of Narcissi.

Pæonies.—It is imperative that strong clumps of these be also staked without delay, for once the stems sway off the upright, it is impossible to get them straight again. I use three to six strong Bamboo sticks to each, inserting them at an angle from the plant and attaching a strand of strong string to each near its tip. If space is left for the shoots to press outwards as they extend in height and before the flowers open, the supporting material is hidden from view.

Anemone Hepatica.—When Hepaticas get aged, the clumps become mere rings, the centres dying away. The present is a suitable time to lift all such, pulling the plants to pieces, and if wanted in masses, planting them at once 6 inches apart. They are rather difficult to divide, but, by steeping the plants in water and washing the roots free from soil, division is greatly facilitated.

Auriculas.—Though valueless from the florist's point of view, a selection of these in yellow, bronze, brown, crimson and other pure tints provide a delightful feature in the garden. They are now passing out of flower, and the flower-stems should be removed before seeds begin to form. Clumps that have become too large cannot be reduced by division at a better time. They require to be deeply planted quite up to the base of the leaves. Special varieties of Primroses, such as the single green and doubles, should be treated in the same way. Some of these are difficult subjects in light, dry soils, and probably there is no better way of treating them than by biennial division and replanting in fresh soil.

The Plant-Houses.

Dracænas.—After the rooted tops are removed and placed in pots, the stems, and also pieces of the thickened roots, may be cut into short lengths and buried in sand in the propagating-frame, where they will in due time form roots and push shoots, each forming useful plants in the course of the next year. *Dracænas* must be kept damp and not too hot, otherwise thrips will prove a persistent nuisance.

Phyllocactus.—The time when this flowers is at hand, and it may be well to note that dryness is essential for the flowers, which speedily rot if the plants are kept in an atmosphere saturated with moisture. *Phyllocactus* is easily propagated. All that is necessary is to select a clean and healthy piece, planting it firmly in a 4-inch or 5-inch pot in a simple compost. Apply no water till roots are formed. The after-cultivation consists in repotting as required and giving the plants a light position in a warm greenhouse.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE KITCHEN GARDEN.

SPRING CABBAGE.

WE have been cutting Early April since the end of March, and nice little developed heads, too. One or two varieties have bolted rather badly, but we are using the greens and then pulling up the plants and replacing with some fresh stock which has been pushed along in frames, and which will make a fine succession. In order to always have some nice young Cabbage it is a good plan to sow some of the summer varieties about every month from March to June or July. Sutton's Flower of Spring is a good variety to follow Early April, and is a Cabbage of much merit. Carter's Early Heartwell is another Cabbage of exceedingly fine quality, and one of the very best in cultivation. Carter's Beefheart is also a splendid Cabbage, probably one of the finest grown. It is, moreover, very hardy as well as robust, and when a large Cabbage is wanted, this is the one to grow. These are, of course, August-sown Cabbages. Good varieties to sow now are Sutton's Favourite, Earliest, Tender and True, and Sutton's All Heart. Sown now and onwards, these make very dainty dishes through the summer months, and are always welcome. These can be put in as catch-crops to fill up the ground where early crops have been gathered, and such crops do not take much out of the soil, as the longest time they are on it is not many months. I like to see the ground occupied rather than lying dormant. We have to crop nearly all our ground twice and thrice in a year, as far as is at all practicable.

The Gardens, Leonardslee. W. A. Cook.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Odontoglossum Uro-Skinneri Burford Variety.

—A handsome variety, remarkable for its depth of colour and exceedingly broad lip. The plant shown was of robust habit and carried a strong spike of large flowers. Shown by Sir Trevor Lawrence, Bart.

Cattleya Schroderæ Glebelands.—A fine variety of a well-known Cattleya. Its most noteworthy feature lies in the exceptionally large chrome yellow zone in the lip of the flower. The petals are very pale mauve, almost white. Shown by J. Gurney Fowler, Esq.

AWARDS OF MERIT.

Cheiranthus mutabilis Keeley's Variety.

—A plant of decided merit and freedom of flowering. As shown the examples were much dwarfer and bushier than the type, and with deeper-toned flowers, reddish in the main, though variable, as the name suggests. From Mr. W. Rickards, Ask Priory.

Echium truncatum.—A fine companion to such giants of the race as *E. Wildpretii*. The columnar spicate inflorescences are very large, the flowers of an intense gentian blue, and rendered the more attractive by the long protruding stamens, which are of a reddish colour. The species requires the protection of a warm greenhouse. It is very handsome and well deserves extensive cultivation.

Celsia cretica Cliveden Variety.—A very showy variety of this useful plant. The flowers are of clear yellow colour, figured with crimson at the base of the upper petals, and are disposed

in dense spicate racemes. These came from W. Astor, Esq., M.P., Cliveden, Taplow (gardener, Mr. W. Camm).

Cineraria Pompadour (Strain).—We presume we are entitled to regard this as a fancy strain, inasmuch as in all the variations of it there is a marked tendency to colour variation in the florets. The dominating colours are blue, white and rose, and these occur in longitudinal stripes on the florets with a good deal of regularity. As shown the plants were very dwarf and exceedingly pretty. From Messrs. James Veitch and Sons, Limited, Chelsea.

Lewisia Howellii.—A superbly-flowered example of this recently-introduced novelty was shown. The succulent leaves are nearly spatulate, with raised, crested, sinuate margins, the stalked inflorescences appearing from the bases of the lower leaves. The plant carried about eleven finely-developed inflorescences and a profusion of flowers capable of enduring for weeks. The expanded flowers are of the size of a shilling, buff to apricot in tone and striped with red. By far the most remarkable alpine novelty shown at this meeting. Exhibited by Mr. M. Prichard, Christchurch, Hants.

Deutzia longifolia.—A delightful novelty and a good garden plant all in one; a plant, too, that must presently be demanded in its thousands. The great charm of the species is the pink colouring of the flowers, these appearing in axillary clusters on every twig and branch, large or small. Bushy and free in growth and flowering, and neat-habited and hardy withal, the new-comer would appear to possess every attribute capable of rendering it immensely popular. It is one of Mr. Wilson's introductions from China, and we regard it as an acquisition. Exhibited by Miss Willmott, V.M.H., Warley Place, Essex.

Saxifraga Mrs. J. F. Tottenham.—A most charming hybrid kind—presumably *S. granulata* and a Mossy variety. The buds are at first pink coloured, and on expansion reveal a pure white surface. Quite a good novelty belonging to a new and highly attractive race of Saxifragas. (See illustration on page 232).

Saxifraga Comet.—Also a *granulata* hybrid, the evidence being well marked in the leafage. Indeed, if the root characteristics of *S. granulata* remain, it might prove but a glorified form of that well-known kind. The flowers are very large, rather starry and pure white. Both were exhibited by Mrs. Lloyd-Edwards, Llangollen.

Araucaria excelsa elegantissima aurea.—In the small examples as shown this is a very pretty variety, the tips of all the branchlets being of a pale yellow colour, which is in marked contrast to the body colour of the branches. As an excellent companion to Silver Star, which has whitened or silvery tips, we commend this fine novelty to all. From Messrs. Thomas Rochford and Sons, Broxbourne.

Tulip Velvet King.—A very handsome Darwin kind of deep bronzy red colour. From Messrs. Barr and Sons, Covent Garden.

Tulip Grenadier.—A May-flowering sort of the largest size. The dominant colour shade is orange scarlet; internally the flowers have a clear golden base. Exhibited by Messrs. Walter Ware, Limited, Bath. The stock of this fine Tulip has passed into the hands of Messrs. Wallace and Co., Colchester.

The foregoing were shown before the Royal Horticultural Society at Vincent Square, Westminster, on April 30, when the awards were made.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PRIMROSES DYING (Rhaqat).—With the meagre evidence afforded, it would be but the merest guesswork for us to say what insect was the cause of the mischief. We advise you, however, to search for slugs at dusk, and dust the plants with soot. Not infrequently birds in their search for nesting material play havoc with these plants. Usually, however, it is the winter work of the slug.

TALL HERBACEOUS PERENNIALS (E. E.).—You would find the Michaelmas Daisies among the more useful, and from two or three sections you might select all that you would require. In case you wish for greater variety, we give you names: Aster Climax, A. Novi-Belgi Wm. Marshall, A. N.-B. Robert Parker, A. N.-B. Beauty of Colwall, A. N.-B. Arcturus, A. Nova-Angliae Mrs. S. T. Wright, A. cordifolius Edwin Beckett, A. c. Ideal, and A. c. elegans. These embrace three sections of the Michaelmas Daisies. Other good things are Helianthus Mrs. Moon, H. multiflorus giganteus, H. m. major, H. m. fl.-pl. Helenum autumnale grandicephalum, H. orgyalis, Pyrethrum serotinum, Bocconia cordata, Hollyhocks, Heliopsis scabra, Solidago Shortii and S. multiradiata. If space permits of leaf development, Anemone japonica in red, pink and white might well be included.

DAFFODILS (E. W.).—The Lenten Daffodils (*Narcissus pseudo-Narcissus*) you kindly forward for our inspection are just a good ordinary sample of this wilding when growing in congenial soils and amid congenial surroundings. The plant simply luxuriates in moist meadow lands, and as these more nearly approximate to mellow clay, the finer do the flowers become. Where the soils are inclined to be of a reddish clay, there do we usually find a little more external coloration, just as those inhabiting drier and lighter soils are seen to be of a much paler tint. It is all a question of environment, and flowers of the character and good quality you submit are common to Warwick, Worcester, Devon and Sussex. It may be that the residue from the works near by, acting as a tonic, is responsible for a little of the colouring, though the soil and marshy nature may be responsible for much more.

TREES AND SHRUBS.

TREATMENT OF A YEW HEDGE (Bede).—It would help your Yew hedge to thicken at the bottom if you were to cut 6 inches or 9 inches off the top. It will, however, take a very long time to get the lower part well furnished with branches. Should there be sufficient space between the plants, it would be a good plan to interplant with nice young, bushy plants. These in time would spread out and furnish the bottom. If you gave the ground along each side of the hedge a top-dressing of well-decayed manure, it might assist the roots somewhat and cause stronger shoots to be made.

SHRUB FOR NAME AND TREATMENT (F. S.).—The specimen of a variegated-leaved shrub sent for identification is *Euonymus radicans foliis roseo-argenteis*. It ought not to be difficult to propagate. Try taking cuttings of short shoots in June or July, and insert them firmly in pots of sandy soil in a close frame. Water carefully until rooted. Roots ought to be formed in about three weeks' time after the insertion of the cuttings. The Cornish Elm is planted less frequently than it ought to be as a street tree. The leaf you send for name is the Fern-leaved Beech (*Fagus sylvatica* variety *heterophylla*). Fine examples of it are to be found in various parts of the country.

CONE FOR IDENTIFICATION (A. M. D.).—The cone sent for name belongs to the Cluster Pine (*Pinus Pinaster*), a native of the Mediterranean region. If your Pines are growing close together, you cannot expect shrubs to do well beneath their shade; but if there are moderately large open spaces, you could make an effective undergrowth by using evergreen and deciduous Rhododendrons, with patches of Heather and hardy Ferns here and there. The Laurels might be cut down almost to the ground at the present time. All the stumps may not grow again, but the majority ought to form nice bushy plants from new branches produced from dormant buds. You cannot expect much in the way of shrub growth beneath the shade of a large Beech tree. We advise you to plant the ground beneath the tree with Bluebells and Ferns.

THE GREENHOUSE.

ORCHIDS IN A VINERY (N. G.).—There are several Orchids that will thrive in a vinery, provided those selected make their growth during the summer months and are at rest the same time as the Vines. We suggest that you commence with a few plants, such as *Dendrobium nobile* and its varieties *alba* and *nobile*, *D. Ainsworthii*, *D. Wiganii*—in fact, any member of this useful genus; *Laelia anceps* and its various forms known as *chamberlainiana*, *Stella*, *alba*, *Dawsonii* and *sanderiana*. If your house is a lean-to, *Epidendrum radicans*, *xanthinum*, *obrienianum*, *Bouindii* and *kenwense* could be planted against the wall, while such subjects as *Calanthe Veitchii*, *Harrisii* and *William Murray*, also any of the *Catasetums*, would thrive on a shelf about two feet from the roof glass or on the staging beneath the Vines. The chief points in cultivation are to repot when new roots appear at the base of the current growth, using pots just large enough to comfortably take the roots, and allowing sufficient space for one or two seasons' growth. The soil should be clean, live sphagnum moss, good peat and *Osmunda* fibre in equal parts; but for the *Calanthes* and *Catasetums* fibrous loam should be employed instead of the *Osmunda* fibre. Fill the pots one-third of their depth with drainage, and press the soil moderately firm about the base, while the watering must be carefully done at all times. All the plants ought to be kept near the glass. This can be done by means of inverted flower-pots. Orchids have few pests, the worst being thrip, which can be easily kept in check by vaporising the house occasionally; but a sharp look-out must be kept for red spider if it is present on the Vines. We take it your vinery is heated, otherwise it would be useless to attempt Orchid-growing.

FRUIT GARDEN.

CHERRY BLOSSOM REFUSING TO OPEN (G. L. C.).—The branch of Cherry tree with flower-buds on is suffering from a disease termed canker. It is the disease to which, unfortunately, the Cherry tree, like the Apricot, is subject. That part of the tree from where this branch is taken will probably die in the course of the summer or autumn. There is no cure for the disease; but trees slightly affected live to be old and bear good crops of fruit annually.

VINES DOING BADLY (W. M.).—The best thing to do is to lift the Vines as soon as the leaves have dropped in the autumn, overhauling the roots, cutting away the dead ones and shortening the points of all. Clear away all the old soil and see that the drainage is sufficient. Replant in the following compost: To one good barrow-load of turfy, fibrous loam add a gallon of brick ends, broken small (size of a pigeon's egg), the same of old mortar rubble, broken in the same way, three pints of quarter-inch bones and a pint of bone-meal, also a sprinkling of soot. Mix all well together, and have everything ready for replanting before the Vines are disturbed, so that the roots are not exposed longer than can be helped. It is better to lift the Vines entirely than to add more soil to the existing border as you suggest doing.

MISCELLANEOUS.

JAPANESE DWARF TREES (M. A. G. D.).—Japanese dwarf trees may be treated in the same manner as hardwooded, cold greenhouse plants. At all times of the year the soil should be kept moist, but never let it become thoroughly saturated, such as happens when a plant stands continually in water. Repotting is unnecessary, for, should you begin to be too generous to the plants, they will probably outgrow their dwarfed character.

NAME OF FRUIT.—F. T., Lytham.—The fruit was too far gone for us to be sure, but we believe it to be Cox's Orange Pippin.

NAMES OF PLANTS.—G. H.—Rose Catherine Mermet. —A. M.—1, *Daphne pontica*; 2, *Lotus Bertholletii*. —H. W. C.—Flowers insufficient for identification. —L. H.—*Lotus Bertholletii*. —W. J. B.—1, *Adiantum gracillimum*; 2, *Abutilon megapotamicum* var. *variegatum*; 3, *Phlox frutescens*; 4, *Convolvulus majalis* var. *rosea*. —Mrs. H. B.—1, *Narcissus Jonquilla*; 2, *Saxifraga granulata* flore pleno; 3, *Tiarella cordifolia*; 4, *Asperula odorata*; 5, *Waldsteinia fragarioides*; 6, *Saxifraga muscoides* Rhei; 7, *S. m. atropurpurea*; 8, *Iberis sempervirens*.

LEGAL POINT.

Outgoing Tenant: Fruit Trees (Drogheda).—The tenant of an ordinary residential property cannot sell or remove fruit trees, hedges, flowers, nor Box borders, although planted by himself, nor is he entitled to any compensation for them. Sometimes an incoming tenant takes over fixtures from an outgoing tenant at a valuation, and occasionally this is extended to the fruit trees and Rose bushes. If this is done, the incoming tenant should take care that the landlord is made a party to such an arrangement, otherwise they will vest in him at the close of the first tenancy. Any right of removal or compensation that exists is conferred on certain classes of tenants by statute, as on market-gardeners under the Agricultural

Holdings Act, when it has been agreed in writing that the holding should be treated as a market-garden, or on cottagers or allotment-holders. By the Allotments and Cottage Gardens Compensation for Crops Act, 1887, the tenant can obtain compensation from the landlord for crops, including fruit growing upon the holding, fruit trees and bushes planted by the tenant with the previous consent in writing of the landlord, and for labour expended and manure applied in anticipation of a crop. The land held is not to exceed two acres. There cannot be much doubt about what amounts to an allotment; but as the statute gives no definition of a "cottage," trouble may arise as to whether the tenant holds a "cottage garden."—BARRISTER.

SOCIETIES.

AURICULA SHOW AT SPARKHILL.

The first of a series of exhibitions organised by the Sparkhill Horticultural Society was held on April 27 at the St. John's Council Schools, Stratford Road. The exhibits consisted of Narcissi and Auriculas, and the various classes were well represented. The Auriculas were of excellent quality, displaying great care in cultivation, but owing to the date fixed for the show being rather late in the season, the display of Narcissi was not quite up to the usual standard.

The following were the prize-winners: Eight bunches of Narcissi, at least six distinct: First, Mr. E. J. Keeling. Most tasteful arrangement of Narcissi: First, Mr. E. J. Keeling; second, Mr. F. Anderson. Six bunches of Narcissi, at least four distinct: First, Mr. E. J. Keeling. Three bunches of Narcissi, distinct: First, Mr. E. J. Keeling; second, Mr. F. Anderson. Three named show Auriculas, distinct: First, Mr. H. J. Spencer; second, Mr. H. W. Miller; third, Mr. E. Saunders. Three named alpine Auriculas, distinct: First, Mr. H. W. Miller; second, Mr. H. J. Spencer; third, Mr. J. Freeman. Three seedling alpine Auriculas: First, Mr. H. W. Miller; second, Mr. J. Freeman; third, Mr. A. Gilbert. One seedling show Auricula: First, Mr. A. Gilbert; second, Mr. H. W. Miller.

Special classes, open to all comers: Three show Auriculas, named, distinct: First, Mr. G. Savory; second, Mr. J. Freeman; third, Mr. T. M. Eglinton. Three alpine Auriculas, named, distinct: First, Mr. J. Freeman; second, Mr. H. W. Miller; third, Mr. G. Savory. Mr. G. Savory was awarded the society's certificate for the premier Auricula in the special classes, and Mr. H. W. Miller the society's certificate for the premier Auricula in the members' classes. A bronze medal was gained by Mr. E. J. Keeling for the most points in the classes for Narcissi, and by Mr. H. W. Miller in the classes for Auriculas. A certificate was also presented to Mr. C. J. Fox for an exhibit of alpine blooms and other spring flowers.

THE NATIONAL AURICULA EXHIBITION.

WHATEVER may have been the opinions of the promoters on the merits of their exhibition at the Royal Horticultural Hall on the 30th ult., it certainly must have been disappointing to visitors. The table devoted to the show section, which comprises white, grey and green edged and self flowers, had a singularly dull and unattractive appearance, so many of the flowers being stale or otherwise indifferently developed. The corresponding table immediately opposite was, on the other hand, singularly bright with the beautiful gold or white centred alpines, the classes being better filled, showing that while these varieties are easier to grow, they further give much greater floral beauty in return for cultivation. The connoisseur in the shows must be something of an enthusiast over markings, edgings and other attributes; but the average lover of Auriculas admires them for their colour-beauty and undoubted charm, hence he turns to the alpines naturally.

Among edged shows, G. Lightbody, Aene, Fucharis, Richard Headley, Shirley Hibberd and Heatherbell (all old ones) were of the best; and of selfs, Mikado, Peggy Gordon, Harrison Weir, Mrs. Phillips and Victor (maroon crimson), this variety securing the premier award as the best show variety in the exhibition. In the classes for singles, Prince Charming, Rifleman and Shirley Hibberd were the best green edged; with greys, the old G. Lightbody and Richard Headley; with whites, Aene; and with selfs, Mikado (maroon) and Peggy Gordon (red). There were no seedlings worthy of notice. The fancy class brought two collections. The best of these flowers are the yellow selfs, which are charming. Canary Bird, Sunray and Maggie Burck were very bright. It is a pity a special class is not instituted for pure yellow selfs; then all other fancies could go to the rubbish-heap. It is well to notice that while florally the distinctions between shows and alpines are important, shows may be merely all over, but alpines must be quite devoid of merit.

In the alpine section there were five entries of twenty-four plants, thus showing how popular they are. Here, as was the case in all the open classes, Mr. James Douglas was a prominent prize-winner. In the class the most striking gold centres were Duke of York,

Golden Distinction, Majestic and Golden Eye; while white centres were Roxburgh, Argus, Robert Bruce and Prince of Tyre. In Messrs. Phillips and Taylor's second-prize group Mars was the premier gold-centred flower in the section. Others good were The Idol and Her Grace, and of whites Argus and several seedlings. In other classes Muriel, Charles Halcro, Chaucer, Dean Hole and Sunrise were good gold centres; and of whites Hene, Blue Bell, Lucrece and Phyllis Douglas. In single plants with gold centres, Muriel (a far better flower than Mars) was first, with Majestic second and third. Phyllis Douglas was the best white centre, with Prince of Tyre and Roxburgh following. Polyanthus of the border varieties, which usually make so conspicuous a feature in groups, baskets, or in pots, were practically absent, only nine small ones or Primroses being set up, and those were worthless. The *Primula* species were represented by one small basket of four kinds—*obconica*, *japonica*, *Sieboldii* and *malacoides*. How we sigh for the collections of those beautiful Primroses once shown in such profusion! Clearly the National Auricula Society wants some revival of its old glory, or else be quietly laid to rest. A further need is improved naming, as at present only labels are used, and those are buried behind the foliage.

* * * Owing to the demand made on our space by other subjects, we are compelled to hold over the report of the Midland Auricula Show. This will appear next week.

OBITUARY.

THOMAS JONES.

By the death of this gentleman there passes away, in his eighty-sixth year, one of the foremost of British gardeners of the older generation. For nineteen years he was head-gardener to Her late Majesty Queen Victoria at the Royal Gardens, Windsor and Frogmore, succeeding the late Mr. Rose in that position. Mr. Jones retired from the Royal service on a pension twenty-one years ago, and has since lived on a property he purchased at a pretty country village (Puttingham) near Wolverhampton. Here he passed away his time among surroundings congenial to his nature and to his life-long work, namely, gardening and farming (in a small way). Born at a farm in Denbighshire, North Wales, he never lost his love for farming, cattle, horses and dogs and all appertaining to that life always appealing strongly to his nature. As a gardener, possibly fruit and vegetable culture appealed to him more strongly than did other aspects of garden work, although in a garden of the extent and importance of that at Windsor all other aspects of practical gardening claimed and engrossed the whole of his time and care. Mr. Jones was a gentleman of strong personality and character. He was absolutely indifferent to the applause or the criticism of the world of gardening outside, content to pursue his own life in his own way. By strangers he was apt to be written down as a martinet, and of austere and uncompromising demeanour. But to those who knew him well he revealed himself as a genial, kind-hearted and most entertaining man. He was a gentleman who never spared himself, but gave his life wholly to his profession, earning and retaining the full confidence and appreciation of his Royal employer to the last. Mrs. Jones predeceased him by some years. They had no family. Previous to going to Windsor he had been head-gardener to Lord Leconfield at Petworth for many years.

"Country Life" for May 11 contains, among other articles, an illustrated account of "Buckhurst Park.—I."; "Tale of Country Life: Through—A Legend of Loch Gur," by Dorothy Conyers; "The Songs of Labour"; "On the Growth of Two Salmon" (illustrated), by J. A. Milne; "The Time of the Singing of Birds" (illustrated), by E. L. Turner; "British Birds and Their Observers."

* * * The Yearly Subscription to THE GARDEN is: Inland, 6s. 6d.; Foreign, 8s. 9d.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices. 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Paulownia imperialis Flowering Outdoors.—

During the past week flowers of this beautiful tree have reached us from Devonshire and Somersetshire respectively. In one instance this is the first time the tree has flowered for twenty-five years. Possibly the excessive heat of last summer ripened the wood extra well, and thus induced the formation of flower-buds.

The Mountain Avens.—*Dryas octopetala* is a plant we do not too frequently see doing well in the rock garden, and in some soils it apparently refuses to grow and dwindles away. Some attribute this to want of moisture and peaty soil, but its real need is lime, and this should be supplied if the *Dryas* is to be really healthy and happy. We saw a very fine plant the other day in quite a dry place, which never thrived until it was supplied with plenty of lime. Then it began to thrive and grew apace, until it has formed a plant of exceptional beauty and size. It is more difficult to induce it to bloom as freely as on its native hills, and the plant referred to does not flower quite so well as is desired. It, however, produces a fair number of its fine white flowers. Sun and lime, with some peat in the compost, will do well for the Mountain Avens, which is so beautiful in or out of bloom.

An Interesting Chinese Honeysuckle.—The sunny summer of 1911 has been responsible for numerous shrubs flowering more freely than usual, and this is the case with several of the bush Honeysuckles. *Lonicera tatarica* is flowering with great freedom at Kew, and a large bush in the vicinity of the Ferneries is a mass of bloom. *L. tatarica* is a native of Siberia and North China, and grows into a bush 12 feet or 15 feet high and as far through. As is the case with other bushy species, the flowers are borne in pairs from the leaf-axils, and not in many-flowered heads as is usual with the trailing kinds. The flowers of the type are white or but faintly tinged with rose; but there are varieties which have pink and red blooms, two very good coloured kinds being *pulcherrima* and *punicea*. *L. tatarica* requires no elaborate cultivation, for given good garden soil it grows quickly. Ordinarily, plants are not more than half as well flowered as they are this year.

Double Wallflower Harpur-Crewe.—This old Wallflower, known long before the time of the revered flower-lover whose name it bears, is, as usual, doing well this season and is giving great quantities of its pleasing yellow flowers. It is not to be placed in the same plane as the double German Wallflowers, but is a much more delightful plant. This is said without any attempt to disparage the German Wallflowers, which are very

fine in their own way, but a good bush of Harpur-Crewe three or four years old will give a host of neat spikes of fragrant double yellow flowers, and is quite in place in a good border or on a rock garden. It is readily propagated by cuttings, and it is always desirable to have a few of these in case the old plants succumb to the winter, although this *Cheiranthus* is wonderfully hardy and long-lived. It does best on a dry and sunny place, and is always acceptable both for its beauty and for the exquisite fragrance.

The International Horticultural Exhibition.—

This exhibition, which is to be opened next Wednesday by His Majesty the King, promises to be the largest and best of its kind that has ever been held in this country, and will be an event that those who see it will, we hope, look back upon with considerable pleasure. But there will be many who, from some cause or another, will not be able to visit the exhibition; and in response to the wishes of a number of such readers, we shall next week publish a Special Double Number. This will contain a sixteen-page supplement, giving details of all the best things to be seen at the exhibition, as well as a number of illustrations prepared from photographs of the exhibits. Some interesting illustrations of Chelsea Hospital itself, together with a brief account of this historical home for pensioners of the British Army, will also be included. The price of this special issue will be twopence, and copies will be on sale at our kiosk in the exhibition grounds at Chelsea on Thursday afternoon, May 23. We shall be pleased to welcome any of our readers who care to call at this kiosk, which will be situated in the Central Avenue.

A Pretty New Fuchsia.—In the early part of last year a seedling Fuchsia was forwarded by a correspondent with a request for our opinion concerning it. At that time it struck us as an extremely pretty variety, an opinion strengthened by seeing some flowering examples in the winter. It was placed before the floral committee of the Royal Horticultural Society on April 30th by Messrs. W. H. Rogers and Son, Red Lodge Nursery, Southampton, but did not get an award. Still, we think that is bound to come if further shown. The name is *Benita*, and it is said to be the result of a cross between a Continental variety—*Gartenmeister Bonstedt*—and *F. splendens*. The flowers, which are borne in great profusion at the ends of the shoots, are about an inch long, and hang suspended by slender pedicels of the same length. The stout tube of the flower and the sepals, which, however, never reflex, are of a rosy scarlet colour, while the petals are of a bright orange scarlet. It is of a freely branching habit and flowers profusely. As *Gartenmeister Bonstedt* has resulted from the crossing and intercrossing of *F. triphylla*, *F. fulgens* and, perhaps, others, the variety *Benita* has in it the blood of at least three distinct species.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Hyacinths and Abutilons.—Seeing the photograph of Grand Maître Hyacinths at Hampton Court in THE GARDEN for April 27 prompts me to record that I saw the same variety of Hyacinth most effectively employed this season in a public garden as dot plants in a groundwork of the ordinary Jonquil. The latter was indeed a fine set-off for the large azure blue spikes. In THE GARDEN of May 4, page 219, "Avon" has an interesting article on Abutilons, but he makes no mention of their usage out of doors. In fact, he seems to imply indoor treatment only by suggesting a cool structure for the summer months. Some of the varieties at least make splendid summer bedding plants. Has he not tried any? Since living in North London I saw a variegated variety in use in a neighbouring garden. It may have been *Thompsonii*. At a former place—Eaton Hall, Chester—Abutilons were used in the summer beds. I particularly remember a variety with mottled leaves being used dotted among certain beds of *Violas*.—C. T.

Rosa Hugonis Flowering Early.—This delightful little Rose was in full bloom with me on May 6, seven days earlier than the first bloom opened last year. Excepting for a stray bloom of the common China and *Cramoie Supérieure*, this is the first-comer of the glorious Rose season which it ushers in. It is a lovely colour, a clear pale yellow, its single flowers being about one and a-half inches across and of cupped form. They are borne singly on short stalks the whole length of the growths, so that to prune this Rose would be to cut away its blooms. In growth it is unique, the prickles being of large size and the whole plant extremely pretty, even when not in bloom. There is a fragrance not unlike the Austrian Briars, only not so strong. Grown as a single bush upon the lawn in the centre of a bed of *Geum miniatum*, or, better still, of that marvellously rich-coloured *Geum Mrs. Bradshaw*, the effect would be delightful in the early May days.—W. EASLEA, *Eastwood, Essex*.

Potentilla Valderia.—With reference to Mr. Arnott's note on *Potentilla Valderia*, page 227, issue May 11, this plant, like *Viola Valderia*, takes its name from the *Bagni di Valdieri*, a charming health station of hot springs in the Gesso Valley on the north side of the Maritime Alps, immediately at the foot of the *Argentera*. The locality, besides its great beauty, is a very rich centre for plants, both *Saxifraga pedemontana* and *S. flornlenta* having stations close at hand. The *Potentilla* abounds in stony places by the river, especially about a quarter of a mile below the hotel. The true *Potentilla Valderia* is distinguished by foliage of an extraordinarily beautiful argentine effect, the three-lobed leaves being neither green nor variegated in any way, but as if actually cut out of silver. In Nature the plant is very robust and stalwart, attaining a height of some two feet; in cultivation it has with me always remained quite neat and dwarf. It also shows an extreme reluctance to flower, a fault, however, which one regrets the less in that the flowers, carried in tall, leafy cymes, are not up to the promise of the plant's foliage charm, having narrow white petals, between which appear the broad green sepals, giving the bloom a rather dingy effect.

Full notes and description of this species will be found in my "Among the Hills."—REGINALD FARRER.

Exhibiting Daffodils.—Mr. Jacob invites criticism of his selection of the best flowers at the Royal Horticultural Society's Daffodil show, page 220, issue May 4. The flowers he mentions as the best I also think were in "the first flight," but I do not agree with Mr. Jacob's idea of "placing." When you try to do so in the case of such dissimilar flowers as he describes, I think you attempt the impossible. If you say *Avalon* is the best of its class, one knows where one is; but to say that it is better than *Susan* (what a name!) is like saying a handsome brunnette is better than a lovely blonde! Let us call them first-class flowers of their respective divisions. In addition to the flowers Mr. Jacob mentions, there was a *Poeticus* on Mr. Engleheart's stand which subsequently appeared on Mr. Wilson's stand that I think was of its "class" a very fine thing, and seemed to run *Coronation* very close. It was very large and round, with a distinct red-rimmed eye of pleasing form. There were also two very fine flowers of their class shown by Mr. Crosfield, viz., *Dick Turpin* and *Mougle*, both flat-cupped *Barris* (with apologies to the framers of the list classification), petals very overlapping, of a creamy white, 3-inch spread, very serrated red orange eyes; much alike, but I thought *Dick Turpin* would be the better flower. *Olivia*, another of Mr. Crosfield's flowers, was a very beautiful *Leedsii*, with pure white petals, very broad. The short trumpet of palest yellow, much crinkled or frilled at the edge, has a suspicion of green in it. Other flowers I have noticed at the Royal Horticultural Society's and other shows are: *Adela*, a *Barri* with pure white, overlapping, slightly recurving petals, 3¼-inch spread, with a very pretty pale yellow crinkled eye with a green centre. *Black Chief*, an all-red eyed *Poet* (Engleheart) with an extraordinarily dark edge that looks almost black, which I saw subsequently on Mr. Bourne's stand. *Boadicea*, enormous white trumpet, slightly hooded. *Clipper*, large starry-petalled flower, clear self orange red cup, 1-inch spread and three-quarters of an inch deep, serrated edge (Wilson). *Deepdale*, a giant *Leedsii*, which was given an award of merit at *Edgbaston* (Milner). *Dovedale*, large, even-petalled flower, dark yellow cup, thin red edge (Milner). *Felix*, a seedling from *Brodie* (*Jeannie Woodhouse* × *King Alfred*), dark yellow trumpet, very reflexed rim, yellow hooded perianth. *Finespun* (Cartwright and Goodwin), large long-cupped. *King Cup*, said to be the result of the cross *King Alfred* and *Mme. de Graaff*. *Flame* (which, by the by, is a theft of a name registered by me!), a flat orange scarlet-eyed satiny white flower raised by Mr. Engleheart, and now in Messrs. Cartwright and Goodwin's hands, I believe. *Idris*, a large *Leedsii* with small cup of pleasing yellow (Watts). *Imperialist*, large orange flat eye, pure white perianth, 3¼-inch spread, broad petals, 1½ inches, rather blunt-ended. *Henry James*, a flat golden yellow-eyed flower, with fine large petals white and overlapping. *King George IV.*, a narrow-petalled *Miss Willmott*. *Killecrankie* (Crosfield), a large yellow trumpet *Leedsii*. *La Lure*, an enormous-mouthed short trumpet 2 inches across by 1½ inches deep, of pleasing light yellow colour; perianth white, of great substance; broad petals 1¾ inches by 1¼ inches, small petals 1 inch broad. *Little Joan*, already described by Mr. Jacob, a lovely *Ivory* and *Pink shell-like* flower. *Marsh*

Maiden, a very good pure white trumpet, flower-perianth broad and overlapping, but not quite smooth; trumpet shortish, and very much turned back and frilled at edge. *Potent*, a magnificent giant *Leedsii*. *Roseate Dawn* (shown as *Early Dawn*), a very open-mouthed *Leedsii*; trumpet much serrated and reflexed, and coloured distinctly a pink shade at mouth; perianth with 1½-inch petals, 1½ inches broad. *Vestal Virgin*, a massive white trumpet flower; perianth 1½ inches; petal, 2 inches long; trumpet palest lemon, 1½ inches long, 1½ inches wide; lip turned well back, slightly drooping; 18-inch stem. May I add that *Pink Beauty* and *Chameleon* have flowered very well with me this year, the former making a most delicate bit of colour in the flower-beds.—C. LEMESLE ADAMS.

Fruit Blossom and Frost.—The note under the above heading on page 225 of last week's issue compels attention to the immense importance of affording some effective protection to the trees during the flowering period. The fruit-growing industry has grown so enormously of late years that it may now justly be called a national industry of no mean importance, and the loss sustained by those engaged in the business is a heavy one, with, unfortunately, no chance of making it good until another year. If such more or less preventable damage was inflicted periodically on the property of other traders or professionals, there would have been such a hue and cry against it that a remedy by protection or insurance, or in some other effective way, would have been forthcoming long ago. But the sufferers being simply poor horticulturists—a body without soul, unity or purpose, as far as its national interests and existence are concerned—the tragedy goes on, and apparently is likely to go on for ever. Cannot something be done to, at any rate, mitigate the severity of the losses? Could not a Government Commission be appointed to take evidence and find out, if possible, whether any effective and practicable scheme entailing but moderate cost in its application could be found; and if found, its provisions made compulsory by law, the same as is the case now in respect to the *Gooseberry mildew*? Something effective in this direction has already been done, especially in the county of *Worcester*, where much land is now given over to fruit culture. One gentleman, Mr. Bomford of *Leigh Farm*, near *Worcester*, a large grower, with whom I had a conversation on the subject last winter, has great faith in the efficacy of a strong potter of warm smoke emitted from lamps secured to stakes and fixed at certain distances apart throughout his orchard. He has had the system in operation for many years, and he assured me that in consequence he had had only two failures of crops in thirteen years, and that some of his crops in some seasons more than bought the freehold of the ground on which they were growing. The orchard in question consisted of Apples, Plums, *Gooseberries* and *Black Currants*. The lamps are filled with a liquid which, when ignited, gives off a strong potter of warm, dense smoke, which warms the air and thus keeps frost at defiance. An alarm is provided in the orchard by fixing a thermometer in an exposed part with an electric wire and bell attached. The bell rings in Mr. Bomford's room as soon as the mercury in the thermometer falls to freezing-point. The lamps are then lit, no matter what time of the night it may be, if deemed necessary. The cost is said to be comparatively small.—OWEN THOMAS.

Grape Hyacinths as Cut Flowers.—It is, of course, a matter of taste, but I can hardly imagine short-stemmed flowers like the Muscari looking their best in vases a foot high as advised on page 189, April 20 issue. When having occasion to use them, I find they are much more effective when arranged in shallow bowls as a groundwork for the smaller-flowered Narcissi. A very charming combination is Narcissus Leedsii Mrs. Langtry or Duchess of Brabant and Muscari Heavenly Blue. In the borders, planted alternately in bold clumps with the yellow or sulphur Daffodils, they are equally effective and make a pleasant contrast of colour.—H. S. W.

Bedding Tulips.—Like your correspondent "A. D., Kingston-on-Thames," who writes on page 202, issue April 27, I have never seen Tulips better in colour, evenness of flowers, and in other ways more satisfactory than they have been during the present spring. When the plants first showed their flower-stems, they looked somewhat weakly, but directly the warmer weather came they commenced to strengthen rapidly. In the Bournemouth public gardens there are many large beds filled with Tulips mainly, and they have been splendid, large blooms borne on long but stout stems. The flowers are very even in size, and there are no gaps. Undoubtedly the bulbs were well ripened last summer, and in proof of this, when the bulbs came to hand in the autumn, many of them peeled very much; but, of course, the loss of the outer skin in no way interfered with the flowering of the bulbs.—G. G.

Exhibition versus Private Garden Flowers.—"An Amateur," page 214, issue May 4, seems to have a grievance against exhibition flowers, and lays extra stress upon professional florists and their advertisements. Having had a very wide experience of exhibitions in various parts of the country, I do not hesitate to say that the amateur cultivators are now in the front rank as exhibitors; furthermore, that shows are far more numerous now than they were a generation ago, and that it is to a very great extent owing to the produce staged at the exhibitions that emulation has been widely roused among amateurs, and the beneficial effect in the gardens throughout the country is now only too apparent. I need only refer to the improvement in Roses, Carnations, Begonias, and alpine plants. People flock to the shows in order to learn, to see the advance made in garden produce. Witness the Sweet Peas and the herbaceous flowers now staged at exhibitions. Do they not suggest cut-and-come-again in their case? I think so. I do not wish to write a long note on this subject, but would like to say that the public are the best judges, after all, and flowers are universally grown according to their approval or disapproval, and the professional florists are the first to find out this.—B.

FORTHCOMING EVENTS.

May 21.—Preston (Somerset) Gardeners' Society's Meeting. Croydon Horticultural Mutual Improvement Society's Meeting.

May 22.—Royal International Horticultural Exhibition. Opening ceremony by His Majesty the King at 12 noon in the Chelsea Hospital Gardens. Exhibition open to the public on every day until May 30 inclusive. Bath and West and Southern Counties Show at Bath (five days). Royal Botanic Society's Meeting.

May 24.—Linnean Society's Meeting and Anniversary. Hertford Horticultural Society's Meeting.

May 25.—Wakefield Paxton Meeting.

THE ROSE GARDEN.

THE MUSK ROSES.

THE Immortal Bard, when he alluded to "sweet Musk Roses" in "A Midsummer Night's Dream," had probably some other Rose in mind than *Rosa moschata*, or *Brunonii* as it is sometimes called, for this species has very little of the fragrance of Musk about it; in fact, Mr. Sawyer, in his interesting discourse on the odour of the Rose in "Rhodologia," says that *R. Brunonii* develops a fine odour of Pinks.

In some of the varieties that are descendants of *R. moschata* there is a distinct Musk-like fragrance very perceptible after a shower.

The species is found from Southern Europe to India, which may account for its somewhat tender nature; but there are few gardens in England where it could not be grown, although it seems to revel in gardens near the coast. I have seen some magnificent examples of *R. moschata* in the late Lord Battersea's lovely gardens near Cromer.

Like many rambling Roses, the Musk Rose likes a position where it can ramble away unmolested by pruning-shears, and it makes a fine show drooping from a lofty balcony or clambering over an old tree. There are some interesting Hybrid Musk Roses now in cultivation, and perhaps it may be well to name a few. I quite expect this species will be used by hybridisers more frequently than hitherto. I see Messrs. Paul and Son of Cheshunt, ever alive to the creation of good garden Roses, are crossing the Polyanthas and Musk Roses together. A novelty they announce for distribution in June is named

Queen of the Musks, and it is described as a new departure in the Dwarf Polyantha Roses, the novelty having large bunches of creamy white flowers with pink centres, the buds being rosy pink. Another fine Rose from the same raisers is

Snowstorm, producing an almost continuous display of white, semi-double blooms. In growth it resembles *Alister Stella Gray*, so that it may be the forerunner of a race of perpetual-flowering semi-climbers. Already we have promise of some good things among these semi-climbers, and our gardens will welcome every one, so that the pillars at least, if not the arches, will be gay with bloom at a season of the year when we value them so much.

The Garland is undoubtedly a Hybrid Musk. It makes a perfect fountain of bloom if planted as a free bush where it can have abundance of space. A position of about five yards square would be none too much for a single plant, and there are many gardens where this could be given on the lawn or in an open space in a wood. To see such Roses grow to perfection, large holes should be taken out fully 3 feet deep and wide and filled with good soil and manure. What a delight it would be to come upon such specimens even in the woods and copses that adjoin many gardens! One plant will carry thousands of blooms, which expand about mid-July and exhale quite a Musk-like fragrance. The blooms are buff-coloured.

Mme. d'Arblay, too, is finding favour more every year, its lovely semi-double, snow-white blooms being produced in great profusion, normally about the end of June; but here, on May 1, it was already in bud this year, which shows how remarkably early some things are. *Mme. d'Arblay* will make huge, thick growths with very formidable prickles. It is best seen, I think, as a pillar Rose.

Rosa Pissardii is another hybrid that possesses the perpetual-flowering character, and which should be serviceable to the hybridist. There are two forms, one white and the other pink.

R. moschata alba, although so named, cannot be related to the true Musk Roses. I should say it belongs more nearly to *R. gallica*.

Rivers' Musk is a pretty autumn-flowering hybrid with buff pink blooms, double, and of nice form.

Eliza Werry has large trusses of small nankeen-coloured blooms, produced about the third week in July.

Fringed Musk has cup-shaped flowers of buff white colour, and

Princesse de Nassau bears yellowish straw-coloured cup-shaped flowers, very sweet and double. These last four would be excellent as pillar Roses to flower about the third week in July.

One could readily believe that the old *Noisette* Roses have descended from *R. moschata* crossed with some other species, for they possess that aromatic fragrance so peculiar to the Musk Roses, and, as I said before, there is scope for the hybridist to use these to great advantage. P.

OUR SUMMER ROSES.

WHILE looking at the display of Tea and Hybrid Tea Roses last autumn, the thought came to me how very few years ago it was since the term "summer" Roses was applied to those that only bloomed once in the season; also, how very few we had that were worthy of the name of summer bloomers. Now we do not have to grow so many varieties in order to keep up a succession of flowers, for the true summer bloomers are the beautiful hybrids that do not leave us from June until that first severe frost arrives which cuts down all floral beauty. In constant succession there are blooms of *Mme. Ravary*, *Anna Olivier*, *Peace*, *G. Nabonnand*, *General Macarthur*, *Le Progrès*, *Mme. Antoine Mari*, *Corallina*, *Melanie Soupert*, *Viscountess Folkestone*, *Richmond* and *Grüss an Teplitz*, to name the first dozen occurring to me as I write. There are a hundred more varieties among which it would be hard to say which are the most generally useful. About twenty years ago the National Rose Society and many growers were strongly against forming this new class. But it soon came to pass that only a very few could refrain from making some distinction as the several beautiful introductions followed year by year. It is invidious to choose one class or section alone, for all are beautiful and well suited for some purpose; the sole fault lies in our not studying the best purpose more closely. In all classes or sections there are varieties now which are totally different in habit to the general character, and consequently the purposes they are best adapted for differ considerably.

I am certain a bed of *Mme. Ravary*, also one of *Mme. Pol Varin-Bernier* that I saw last autumn, could not have been improved upon for massing. And yet how often we find ill-placed mixed beds, from which the effect is never so pleasing. To plant a variety which throws up an occasional growth of extra strength by the side of one that is invariably compact makes the whole effect bad. I did not think of giving any descriptions of varieties here nor names. Any good catalogue will afford them far better than can be done in a short article of this description; but I would remind any prospective purchasers that they may depend upon the sorts a recognised grower describes as being most reliable, and we have, fortunately, many such now. A. P.

THE GREENHOUSE.

DAPHNE ODORA ALBA.

THE beautiful *Daphne odora* and its varieties *rubra* and *alba* are largely cultivated in gardens, being highly prized for their deliciously fragrant flowers, which are produced during the first three months of the year, a

season when such flowers as those of the *Daphne* are particularly valuable. Although they will succeed and flower profusely out of doors in the warmer parts of the country, they are, strictly speaking, cool greenhouse plants.

As these *Daphnes* are somewhat slow-growing, they require careful treatment, and on no account should they be overpotted. Watering must also be carefully attended to, especially in winter. During the growing season the plants delight in a warm, moist atmosphere. After growth is completed for the season, place them in a drier and more airy situation; this will enable the wood to become thoroughly ripened, which is necessary for the production of flowers.

The plants will succeed best in a rich, open compost consisting of two parts peat to one part of fibrous loam, with a good proportion of sand added. Good drainage is also an essential point. Propagation may be effected either by cuttings or grafting, using *D. Laureola* as a stock. Plants, however, on their own roots are to be preferred, these being generally longer-lived than grafted plants. Cuttings of the half-ripened wood taken off in August root readily if inserted in sandy soil and placed in a propagating-case with a temperature of 55°.

Although the variety *alba* illustrated on this page is not so often met with as *D. rubra*, it is quite as beautiful, and is to be especially recommended where white flowers are in demand. *D. odora* is a native of China, and was introduced into this country in 1771. It is more generally met with in gardens under the name of *D. indica*.

A SWEET-SCENTED GREENHOUSE PLANT.

ALL lovers of sweet-scented flowers should grow *Boronia megastigma*, a charming denizen of New South Wales, whose small, cup-shaped bells, maroon on the outside and yellow within, hang poised from the whole length of the slender, graceful shoots. It is the possessor of fragrance of a high and rare order; high because of the delicacy of its perfume, which is refined and almost indescribable, about which there is nothing redundant or cloying; and rare because of its extraordinary carrying power. A single plant will waft its aromatic message through a whole house, and a *Magnolia's* sumptuous perfume can scarcely do

more. When 5 yards distant from the open door of a greenhouse in which a solitary plant of this *Boronia* is in flower, one becomes conscious of its odour, yet the scent, though perceptible at long distances, is never powerful.

Flowering plants of this *Boronia* may at the present day be purchased at a low price. If these—after their blossoms, which are very lasting, have faded—are cut hard back and, after breaking again, are repotted, care being taken that the roots



FLOWERING SPRAY OF *DAPHNE ODORA ALBA*, A FRAGRANT PLANT FOR THE GREENHOUSE.

are not disturbed, and given a shift into pots one size larger, using peat and a little sand, and keeping them in a warmer position for a week or two, they will soon throw out shoots, which, if an increase is desired, may be taken off when about two inches long, inserted in well-drained pans in equal parts of peat and sand, and placed in a warm house in a propagating frame until rooted, shading from sunlight when necessary. When well rooted, they may be potted off singly, the tops being pinched when they show signs of renewed growth.

The old plants, when their growth is completed, should be placed in the open for a month or six weeks, in order to solidify the wood. In sheltered gardens in Devon and Cornwall, *B. megastigma* is often grown in the open, and may be seen in the late spring bearing a good crop of its deliciously-scented flowers.

WYNDHAM FITZHERBERT.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

The Buds.—A considerable diversity of opinion exists as to the extent to which Carnations and Picotees growing in borders ought to be disbudded. There are some cultivators who do not hesitate to decide in favour of the removal of all except the crown or central bud; others are equally as firmly convinced that three buds is the correct number to retain; while a third group avers that not one bud should be removed, because so doing constitutes an unnatural method of culture. Personally, I much prefer to rest among the second section, as I think that a group of three perfectly-formed flowers is the acme of beauty. Something must be said in favour of the most severe form of disbudding, and which is only had recourse to, as a rule, by those who hold exhibiting the principal object of culture. My sole reason for not advocating it lies in the fact that it has a tendency to encourage coarse blooms. A plant in splendid health, with its roots working in excellent soil, builds up immense energy, and it is seldom conducive to refinement to restrict the flowers to one on each stem. For size the individual bloom has the lead, and if coarseness does not accompany the repression, any objection to the practice falls to the ground. I have no sympathy with those who do no disbudding at all, as I think that the plant loses materially in charm. The suggestion that the system is unnatural is puerile. Scarcely any plants are grown quite naturally, and it is certainly intended that we shall vary from the normal if such variation tends to our substantial advantage.

Supporting Flower-Stems.—

It is essential that this shall have the most careful attention. There are several ways of doing it, of which the worst, and

it is to be feared the commonest, is to put one stick in the middle and pass a piece of bast or string round the stake and shoots. This brings them together in an ugly mass, and, apart from destroying the attractiveness of the habit of the plant, puts beyond the realms of possibility the development of any perfect flowers. Another method is to use galvanised twisted supports, and against these little can be said, provided that the grower is incessantly on the watch to see that the stem does not kink in the twists. If this occurs, the beauty of the flowers is minimised if not destroyed. The third system is to place a slender stick for each stem, attaching it with a thin strand of bast. More time is involved when the work is done in this manner, but there is no doubt that it is extremely satisfactory.

Green Fly and Thrips.—The grower of Carnations out of doors cannot claim that many enemies attack his plants when the conditions of soil and situation are favourable; but it is all too seldom that one wholly escapes from a visitation of green fly, and it is too common for thrips to gain a hold in many gardens. Either of these pests, if allowed to become comfortably and strongly established, will do vast injury and ruin all prospects of the finest results. Therefore cultivators must be constantly on the watch for them with a view to the destruction of the first one that comes along. The persistent searching may be a little monotonous, but it brings a wonderful pleasure when an enemy is seen to kill it without delay. The error of waiting until the pests are numerous is fatal, and entails endless labour and worry to ensure complete riddance. Syringing with pure water in the early hours of fine mornings is an excellent step towards prevention and suppression, but it must obviously be commenced in good time, or it will fail.

Hoeing.—Fresh air is as necessary to the maintenance of perfect health in the roots of the plants as it is to their top growth, and its admission ought to be encouraged at all seasons of the year. It is not a serious matter frequently to prick over the surface with a hand-fork, or to run the Dutch hoe between the rows if it can be managed without risk of injury to the roots or the stems, and air will then find its way in. The rains which fall will penetrate instead of running off, and air will assuredly follow the water. Beyond this, and in its way of equal importance, the dustiness of the top prevents the waste of plant food by the ever-proceeding capillary attraction. F. R.

A LITTLE-KNOWN ITALIAN SQUILL.

(*SCILLA ITALICA ALBA*.)

THE Italian Squill is a pretty *Scilla* which is not much known at the present time, and has been but seldom offered in catalogues until lately. A fresh supply has apparently been procured from Asia Minor, and bulbs have lately been catalogued and are sold in the shape of mixed varieties. The writer has cultivated the blue Italian Squill, originally introduced, I believe, from Italy (hence the name of *S. italica*), for a good number of years, and Maund figures in the "Botanic Garden" this and a white and a rose variety. The rose one does not seem to be procurable at present, but, through the kindness of a lady well known in the gardening world, I was favoured with a few bulbs of the white one, which is here figured from a photograph taken in April, 1912. It is a charming little plant, only about six inches to ten inches high, with conical heads of pure white flowers and neat leaves. This white variety increases more slowly than the blue one, and is as yet very scarce in

gardens. I cultivate it in light, well-drained soil, and with me it appears to have a preference for a semi-shady spot. S. ARNOTT.

DAFFODIL NOTES.

Exhibition versus Private Garden Flowers.—I agree with "Amateur," page 214, issue May 4, more nearly than she thinks I do. As may be gathered from my notes in the issue of May 4, I fully recognise that a Daffodil for the exhibition and a Daffodil for the garden are more often than not two distinct things. The difficulty is how to let the "private public" know which are the best ones for their gardens. My suggestion is northern and southern trials, *à la* Sweet Peas; but without a National Daffodil Society I do not see how it can be satisfactorily accomplished. Like many other things in modern life about which we are doubtful, the "show" Daffodil has come to stay; at any rate, for some years yet. I very

they would be few. So with exhibitions—no "florist" flowers, no public. A second point of view is that Daffodil shows and the aiming at "show" blooms tend to the general improvement of the race, just as agricultural shows and racing promote the breeding of horses of better "stamp." Take some of the Daffodil cast-ups of the advancing tide. Take as typical examples White Lady, Lady Margaret Boscawen, Blackwell and Cornelia. As the refrain of a pantomime song of early days, which is continually jingling in my ear, says:

"What can you wish for more, my boys?
What can you wish for more?"

Hence I would ask "Amateur" and our friends the great "private public" to tolerate shows and what follows in their wake; but to remember when they attend them to order warily, and when in doubt to consult someone who knows the way of the creature.

Garden Varieties.—A great friend of mine, who is biting hard and whom I soon hope to hook as a Daffodil exhibitor, told me the other day that my notes this year had not been of such general interest as usual, because I had rather neglected the better average flowers. I presume he meant he was not prepared to buy such an admirable set as those Messrs. Pearson and Sons advertised in last week's GARDEN. I must own I have erred in this respect. I should have remembered that as things are, the "private public" must largely rely on note-writers like myself. *Peccavi*. And now to make amends if I can—to the garden plant-seekers first; to the would-be showman later on. Here are a few really good new things for the garden: Stromboli (Lilley of Guernsey), a grand palish yellow Ajax, whose special points are size, earliness and tall growth. Golden Spider (Polman Mooy), a slightly paler and later but better formed Golden Spur. I find it very free and a good doer. Solfatare, a most lasting yellow incomparabilis of medium height and pale pleasing colouring. Hall Caine (van Waveren), a tip-top garden variety of immense size and height, a little in the way of the old Frank Miles. It is some years since I first saw it at Hillegom, and forthwith transferred some of it to my own garden, where I am more and more impressed with it every year. Orient, the best and most lasting of *all* the Poetaz for out of



THE WHITE ITALIAN SQUILL, *SCILLA ITALICA ALBA*.

much doubt if even "Amateur" herself would not soon get tired of going to exhibitions where only good garden varieties were to be seen. I think from reading between the lines she recognises this. Theoretically, there should be, I suppose, some "sport" in shooting, and it should not be a sort of who-does-best at a flying target. Practically, it is found by those who give shooting-parties and want guests; it must be so, otherwise

doors. It has good foliage and bears almost always three large, undulating flowers on a stem which rises well above the leaves. In the distance it appears an ivory white, but on closer inspection one sees the pale yellow cup slightly margined with red. Thora (W. T. Ware), a giant Leedsü, tall and very free. With age the large cup assumes a more or less apricot tone, especially under glass. I could write an interesting history of the plant

and how I gradually found out its various qualities for pots and for exhibition on account of its wonderful colouring that comes with age, and for the garden because of its habit, freedom of flowering and size. Constellation, which reminds me of Cynosure, is a decided acquisition. It is very free and a splendid laster. Spinnaker (Hogg and Robertson) is a pointed Lady Margaret Boscawen and about equally effective. I mention it as it is not so expensive. Cassandra, Ben Jonson and Spenser are an excellent selection of the newer Poets, and they are chosen because they have not so much red to burn and because they do not go wingy. Until Florence Pearson and van Tubergen's Zwanzenberg become "practical purchases," I do not see anything that ousts Mme. de Graaff from its position as premier white or palest bicolor trumpet. Of the deeper bicolors, Duke of Bedford and Coronet both have their special claims to notice. The former has size and importance; the latter has earliness and distinctness in trumpet and colour. So I might go on with several more, and long as my list might grow, no red cups would be found in it. The omission is intentional. I would rather they were bought off the purchaser's own bat. With very few exceptions they all fade and "burn" unless they are in some way shaded. With regard to Seagull, White Lady, Lucifer, Blackwell and Torch, they are not mentioned, as I expect all garden planters of Daffodils know them so well.

THE BEST DAHLIAS AND THEIR CULTIVATION.

THE Dahlia is an ideal late summer and autumn flower, and is admirably adapted for town gardens where many other flowers will not thrive owing to the smoky atmosphere. I have seen perfect specimens of the Cactus type grown in Clerkenwell and Stoke Newington. In the former case they were grown in tubs on the flat roof of a house, and the receptacles used were the ordinary margarine or butter tubs, which were first thoroughly burnt out with lighted paper, and then holes about the size of a sixpence burned through the bottom for drainage.

The planting of Dahlias should be done now. The ground ought to be well dug over to a depth

of about two feet and thoroughly broken up, and a liberal quantity of old, well-rotted manure mixed with the soil. The plants, if grown in beds, should be quite 3 feet apart, and a strong stake should be placed in the soil at the time of planting about four inches away from the plant. The stake ought to be at least 5 feet in length. Novices often wonder why such long, unsightly stakes are put in at the time of planting; but to the experienced gardener it is obvious that to insert such a stake at a later period, when the plant has grown 2 feet to 3 feet in height, would mean irreparable damage to the tubers or roots. The plants should be well watered after they have been put in, and loosely but securely tied to the stake with raffia or bast. As the plant grows, the tying process should be continued, fresh raffia being added as needed.

should be given not less than a gallon at each time. Dahlias are very gross feeders, and almost any animal manure is suitable. It may either be dissolved in a tank loosely or placed in a sack and allowed to escape gradually. The feeding with manure-water should always follow after the usual watering. Each plant should be given about one gallon. It is never necessary to feed as much in rainy as in dry weather.

As the blooms begin to open, a sharp look-out must be kept for earwigs and caterpillars. The best plan is to place a 2½-inch pot partly filled with greasy paper on the top of each stake. The pots should be examined every morning and the earwigs and other insects found in them destroyed. The best time to catch these pests is after dusk. The blooms should be carefully looked over with the aid of a lantern. The Pompon varieties do

not require thinning out, disbudding or feeding, and they do not grow so tall as the other varieties.

Dahlias should never be planted in a shady position or allowed to be crowded by other plants or shrubs.

The following is a first-rate dozen of both the Cactus and show sections: Cactus—Ajax, orange buff; Advance, scarlet terracotta; Débutante, peach pink, creamy centre; Dorothy, silvery pink; Dreadnought, dark crimson maroon; Glory of Wilts, pure yellow; H. H. Thomas, scarlet crimson; Mrs. Macmillan, pink, with white centre; Nellie Riding, crimson,



A BEAUTIFUL ROCK GARDEN PLANT, ANDROSACE CHUMBYI. (See page 243.)

JOSEPH JACOB.

Some varieties grow much taller than others, and it is always better to consult a catalogue that explains the height of each variety before putting them in position. When they reach about two feet in height, two other stakes—the same length as the first—should be put in about one foot from the plant, the three forming a triangle.

Thinning and disbudding in the case of the Cactus, decorative and show varieties will cause some anxiety to the beginner. If quantity in preference to quality of blooms is required, it is usual to leave about six main stems; but if exhibition blooms are wanted, the main stems should be reduced to three or four. Shoots multiply very quickly and need taking out from their base. No plant should be allowed to become in the least degree crowded.

As the summer advances they will require a liberal amount of watering—on an average twice a week if the weather is hot and dry. Each plant

with white tips; Rev. T. W. Jamieson, coral pink, with creamy centre; Snowstorm, pure white; and William Marshall, bronzy yellow. Show—A. M. Burnie, orange, with yellow edge; Blush Gem, white, tipped with mauve; Countess, bluish white, shaded rosy purple; Goldfinder, yellow, tipped with red; Harry Keith, rosy purple; J. T. West, yellow, tipped purple; Mrs. Gladstone, soft blush; Mrs. Langtry, cream, edged with crimson; Nugget, orange, tipped scarlet; Sulphurea, sulphur yellow; Tom Jones, creamy yellow, edged with rose; and William Rawlings, crimson purple.

WILLIAM BIGGS.

NEW TULIP VELVET KING.

THIS handsome variety gained the distinction of an award of merit when shown on the last day of April before the Royal Horticultural Society. It is a Darwin variety, and the large, globose flowers are of a dark glossy purple, suffused with a

bronzy hue. The flowers are borne on long, stout stems, and judging by its robust habit, the new-comer has the making of a useful garden variety. It was shown by Messrs. Barr and Sons, Covent Garden.

THE ROCK AND WATER GARDEN.

ANDROSACE CHUMBYI.

ACCORDING to the Kew Guide, this *Androsace*, or Rock Jasmine, is a hybrid between *A. sarmentosa* and *A. villosa*, though as I know it the flowers are a deeper colour than is usual in *A. sarmentosa*, while the foliage, though similar in shape, is smaller and neater. There seems to be some uncertainty among many gardeners with regard to the naming of these two plants, *A. sarmentosa* and *A. Chumbyi*. I notice in Meredith's "Rock Gardens" he speaks of *A. Chumbyi* as being a variety of *A. sarmentosa*, and then goes on to say that it is a stronger grower, deeper in colour, and the flowers are borne on shorter stems than in the case of *A. sarmentosa*.

As far as the last two characters are concerned, they agree with my experience; but the first point, viz., stronger growth, is with me the distinctive feature of *A. sarmentosa*, the summer rosettes of which usually measure $2\frac{1}{2}$ inches to 3 inches across, while the average diameter of my *Chumbyi* rosettes is 1 inch. However this may be, the plants I have under the name of *A. Chumbyi* (and I have every reason to believe them to be the correct thing) are most fascinating little things.

As in so many of the *Androsaces*, the leaves are arranged in rosettes and are very hairy, giving the plant a somewhat silvery appearance, and about May short stalks push up from the mature rosettes some 1 inch to $1\frac{1}{2}$ inches high, each bearing a truss of Primula-like flowers, pink in colour, the eye of which is usually yellow, though I notice in some of my flowers it is of a full dark red.

At this same time the plant produces somewhat Strawberry-like runners, and at the end of each is a new plant. Frequently a single rosette will give off five to eight of these. From the junction of the rosette with this cord or runner new roots are formed, and in this way the plant spreads into a larger patch, and, what seems to be most important of all, permits it to extend on to fresh ground.

With me the plants thrive in very gritty soil, those shown in the illustration on page 242, being in a compost which is about intermediate between the ordinary gritty alpine garden soil and the moraine, and consisting roughly of one

part of loam, leaf-mould, old sifted mortar and sand to each four parts of broken brick which has been passed through a half-inch sieve.

In this gritty medium, kept *amply* moist from early April till July, my little colony is extending very happily, the chief enemy being the damp, foggy days of autumn and winter, during which dirt and other by-products of the city's vapours descend upon the silky rosettes, and would in a short time poison them if precautions in the shape of a sheet of glass, supported some little distance above the clump, were not taken to intercept them. Such a glass sheet effectually achieves this result, and yet allows an ample current of air to



DEUTZIA LONGIFOLIA, A BEAUTIFUL NEW CHINESE SPECIES THAT IS HARDY IN THIS COUNTRY. (See page 244.)

pass over the downy foliage, so modifying the liability of the plants mildewing.

Woodford, Essex. REGINALD A. MALBY.

SAXIFRAGA BATHONIENSIS.

THIS is one of many varieties of *Saxifraga decipiens*, but it is probably the finest of its kind yet raised. It is a rapid grower, and as an edging plant for a garden path it is likely to become as popular as Thrift or Sea Pink. It is of dwarf, compact habit, and in the springtime its glory is enhanced by a profusion of scarlet-crimson flowers. The individual flowers are much larger than those of similar varieties.

TREES AND SHRUBS.

SOME GOOD GARDEN CLEMATISES.

THE coloured illustration of Clematis Lady Northcliffe which forms the front cover of this week's issue directs attention to an important and popular group of hardy climbing plants, for when well grown there are few subjects which better repay the efforts of the cultivator than the various kinds of garden Clematis. Unfortunately, they are sometimes rather difficult to manage, for after making

satisfactory growth for some months, or perhaps for a year or two, they collapse and die without any warning. Numerous theories have been brought forward to account for this peculiarity, the most practical one being that they suffer from overheating of the stems near the ground-line. There appears to be good reason for this idea, for plants which have the lower parts of the stems exposed to full sun suffer worse than those which have their roots shaded. The upper parts, however, enjoy sun; therefore it does not do to select a sunless position. Good loamy soil containing lime provides the best rooting medium, while a surface-dressing of well-rotted manure may be given occasionally with advantage. Two methods of propagation are adopted. Sometimes sections of the stems of good varieties are grafted upon roots of the common *C. Vitalba* and at other times cuttings are rooted during summer.

Numerous positions suitable for Clematises will suggest themselves to the owner of a garden. Planted against a pergola they give an excellent account of themselves; for covering summer-houses or trellises they are equally desirable; while for growing among Ivy on the walls of dwelling-houses they have much to commend them. A use to which they might be more often put, however, is to plant them about the bases of evergreen bushes, stunted trees or Ivy-covered trees, and allow them to ramble at will among the branches. Under such conditions they frequently make charming pictures. In some gar-

dens they are popular for growing in pots, their branches being trained over large wire balloons. Such plants have frequently excited the admiration of visitors at the various horticultural exhibitions held in the Temple Gardens. Pot plants of a less ambitious type find their way into our flower markets in spring. These are usually year old plants grown in 5-inch or 6-inch pots, bearing from six to twelve flowers each. They are very useful for greenhouse decoration, and may be planted out afterwards.

The garden Clematises are divided into several well-marked groups, which succeed each other in flowering. They commence in May and June

with the patens and florida sections; then come the lanuginosa varieties, followed by the various kinds which compose the coccinea, Viticella and Jackmanii groups.

C. patens is a native of China and Japan, whence it was introduced about 1836. Growing 10 feet or 12 feet high, it bears three-parted leaves and large mauve-coloured flowers, which have the segments rather widely separated. The various varieties differ in colour to some considerable extent. A good selection is as follows: Edith Jackman, white, flushed mauve; Fair Rosamond, white, flushed with rose; Lady Lonsborough, silver, with reddish bars; Mlle. Torriana, rose, flushed purple; Mrs. George Jackman, white, with brown stamens; and Sir Garnet Wolseley, blue, with reddish purple bar.

C. florida, a Japanese species, has been known in English gardens for nearly a century and a-half. This and its varieties may be distinguished from the foregoing by the more formal-shaped flowers, with their segments touching or overlapping each other. There are both single and double flowered varieties, of which a selection is appended: Belle of Woking, silver grey, double; Countess of Lovelace, pale blue, double; Duchess of Edinburgh, white, double; and Proteus, purple. Neither of these two groups of varieties requires much pruning, any little which may be required being left until after the flowers are over.

C. lanuginosa is a Chinese plant of vigorous habit bearing very large flowers during July and August. Good ones are Blue Gem, violet blue; Beauty of Worcester, bluish violet; Fairy Queen, flesh, with pink bars; Gloire de St. Julien, lavender, very large; Henryi, creamy white; Lady Caroline Neville, lavender, with purple bands; La France, violet purple; Lord Neville, bluish; Lady Northcliffe, blue; Marcel Moser, lavender, with carmine violet bands; and Robert Hanbury, violet, tinged bluish.

C. Viticella.—This is a very floriferous species, native of Europe. The deep purple flowers are smaller than those of other kinds. Ascotensis has violet flowers; La Nancienne, double violet; J. alba, white; rubra and grandiflora, red.

C. Jackmanii originated as a hybrid between *C. lanuginosa* and *C. Viticella*. It is very floriferous, blooms during autumn and bears purple flowers. There are, however, forms with red and white blossoms. The following are good ones: Gipsy Queen, violet purple; Jackmanii superba, deep purple; J. alba, white; J. rubra, red; Mme. Baron Veillard, lilac rose; Mme. Edouard André, red; Alexandra, violet; magnifica, reddish purple; Othello, purple; Snow White, white; and Ville de Lyon, red.

C. coccinea.—From this herbaceous scarlet-flowered species crossed with garden varieties

several curious and showy hybrids have been raised. Countess of Onslow, violet purple; Duchess of Albany, pink; Duchess of York, pink; Grace Darling, bluish pink; and Sir Trevor Lawrence, crimson, are all good. D.

A NEW CHINESE SHRUB.

(*DEUTZIA LONGIFOLIA*.)

As stated in our issue for last week, page 235, this delightful novelty must presently be demanded in its thousands. The great charm of the species is the pink colouring of the flowers, which appear in axillary clusters on every twig and branch, large or small, a feature that is made quite clear



A BEAUTIFUL NEW DARWIN TULIP, VELVET KING. (See page 242.)

in the illustration on page 243. It was introduced from China by that assiduous collector, Mr. E. H. Wilson, and as a free-flowering hardy shrub it is likely to become immensely popular.

THE KITCHEN GARDEN.

WINTER AND SPRING BORECOLES.

DURING the past few weeks in many parts of the country there has been a great scarcity of good Borecole, and under this heading may be classed the Scotch and Curled Kales, the Sprouting or Hybrid and the older forms of Cottagers' and

Asparagus Kales. For an early supply my note does not apply, as the seed should have been sown before this, but for a late supply I would advise May sowings; indeed, in the South I have sown early in June, and by so doing secured a dwarfier plant and a later supply, as with good culture the plants grow rapidly and give a good return. In the North earlier sowings are made, but in this respect so much depends upon soil and situation. I prefer to plant out the seedlings much smaller than is often done, thus getting a dwarfier plant than when left to become drawn in the seed-beds.

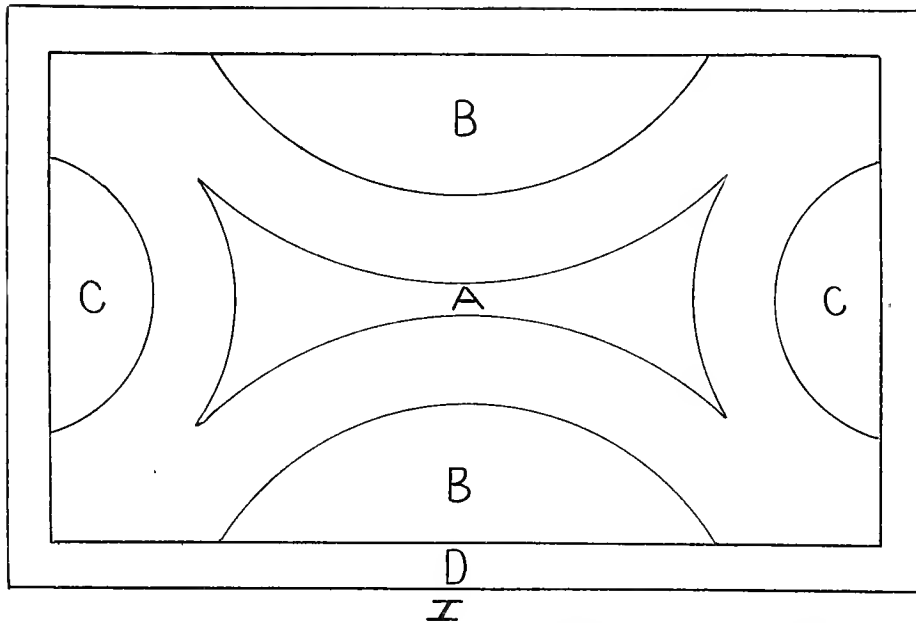
The Kales, as regards soil and situation, are by no means fastidious. They will grow well in any position, and well repay deep culture. As regards the varieties, which are now somewhat numerous, they are all fairly hardy. For instance, take the variegated Kale, nice in appearance with its highly ornamental leafage with so many varied colours, but of less value as a good late vegetable than the green type. The Arctic Kales are deep green in colour and beautifully curled, also of good quality, and they are not gross growers, being admirably adapted for gardens limited in size. The Drum-head Kales, a variety of somewhat recent introduction, are a most valuable addition to our hardy vegetables and delicious when cooked; indeed, in this respect they resemble the early spring Cabbage, have a solid Cabbage-like head, and are remarkably hardy. Another type less known are the Sprouting Kales or Hybrids. I should say even of these there are two distinct varieties—those that make an upright growth like a Brussels Sprout and have their stems studded with close, compact shoots, and others of a much looser build, with longer shoots, and somewhat earlier. The Hybrid Sprouts are splendid for late winter or spring supplies, but I find they are quite large enough for all purposes if sown in May. Sow very thinly to get a stronger plant, and plant out early on good land that has not previously borne a Brassica crop. Then there is the hardy Labrador Kale. This is superior and quite distinct from the older Buda. I think the new hybrids have quite eclipsed the older forms of Cottagers' Asparagus or Buda. They are more profitable, as they take less out of the soil and give a good return, the quality being superior; also, they are of great value for late supplies after the New Year and until May. A new Scotch Kale of great merit is the Victoria Kale; it is excellent for its keeping properties. The Dwarf Scotch, Extra Curled and Imperial Hearting are very fine late varieties.

A word as to culture, and this is very simple. Plant out early and give ample room, say, 2 feet between the rows at least for the hybrid forms and 12 inches between the plants in the row. For many years, to get a very late supply, I planted a portion on a north border. G. WYTHES.

GARDENING FOR BEGINNERS.

HOW TO BED OUT SUMMER-FLOWERING PLANTS.—II.

A LARGE, square-shaped bed may be effectively planted in a variety of ways. Of course, only one design is given in the accompanying plan, but I will mention others very briefly. The whole of the body of the bed may be filled with tuberous Begonias and edged with *Violas*, or it may contain one variety of a Zonal Pelargonium and have an edging of blue *Lobelia*. Heliotrope, with dot plants of *Fuchsias*, would look charming, the edging consisting of white *Lobelia* or white *Violas*. *Salvias*, with dot plants of *Lilliums* and blue *Violas*, *Ageratum* or blue *Lobelia*, would also look effective.



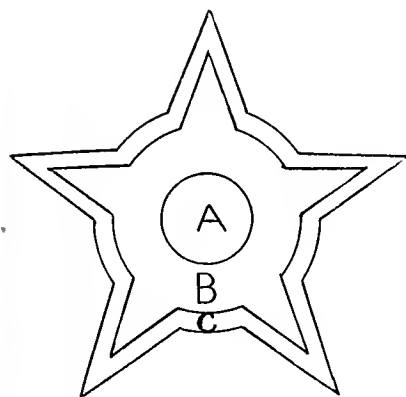
AN OBLONG BED TO BE FILLED WITH BEDDING PLANTS OR ANNUALS.

Fig. 1 as drawn. The centre, *A*, white *Marguerites*; the whole space surrounding *A*, yellow *Calceolarias*; *BB*, Zonal Pelargonium King of Denmark; *CC*, white or cream-coloured tuberous *Begonias*; *D*, Zonal Pelargonium Golden Harry Hieover.

The Same Bed Filled with Annuals.—The centre, *A*, annual *Chrysanthemums*; the whole space surrounding the centre, *A*, *Phlox Drummondii*; *BB*, *Zinnias*; *CC*, *Nasturtiums* King of Tom Thumbs (scarlet); *D*, *Mignonette* or *Portulaca grandiflora*; the latter would make a border of mixed colours.

Fig. 2: *A*, *Fuchsia* Lord Roberts; *B*, pink-flowered Zonal Pelargoniums; *C*, an edging of *Ageratum*.

The Same Bed Filled with Annuals.—*A*, *Calliopsis atrosanguinea*, scarlet flowers; *B*,



II

A STAR-SHAPED BED IS MUCH FAVOURED BY SUBURBAN GARDENERS.

Mignonette; *C*, an edging of *Nasturtium minus coccineum*, rich scarlet crimson.

Fig. 3: *A*, single-flowered *Petunias*, mixed; *B*, brown *Calceolarias*; *C*, an edging of *Geranium Little Dandy*. A dot plant of *Kochia* in the centre of *A* would look charming.

The Same Bed Filled with Annuals.—*A*, *Stocks*, mixed; *B*, *Asters*, mixed; *C*, an edging of *Mignonette*.

An Alternative Scheme.—*A*, *Godetia* Duchess of Albany, white; *B*, *Godetia* Lady Albemarle, crimson; *C*, an edging of *Nemophila insignis*, blue.

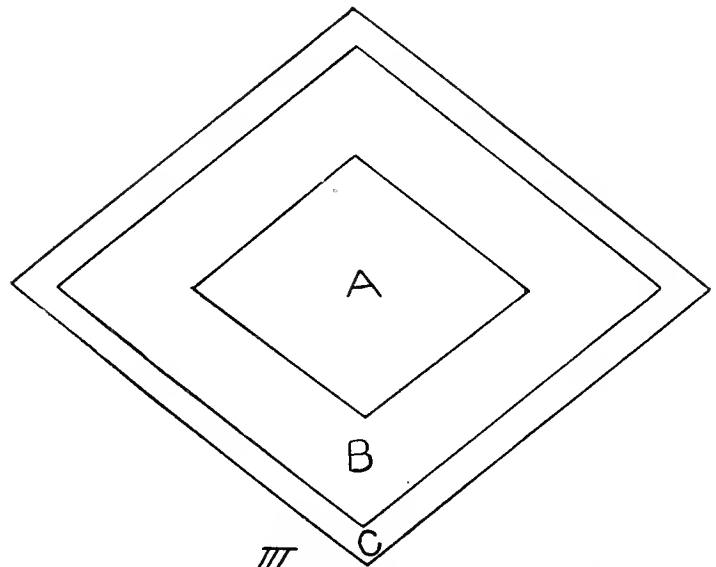
Distance Apart to Plant.—*Marguerites*, 18 inches to 22 inches; the size of the plants, so that when at their best they will not be overcrowded. Dot plants used, if 2 feet high, must not be closer than 3 feet 6 inches.

Soil and Manure.—Some lighter material must be put in for *Fuchsias* if the original soil be clayey. *Marguerites* and *Petunias* must not be planted in very rich soil. *Nasturtiums* require to be grown in poor ground; then the plants make moderate growth and flower well. Overcrowding is a common error in bedding, it being a mistake to grow six plants where one will suffice. G. G.

SUNFLOWERS AND DAHLIAS IN SHRUBBERIES.

ALTHOUGH it is advisable to plant temporary shrubs so as to give to the borders a furnished appearance from the beginning, it is unwise to overcrowd them. In due time, of course, the temporary shrubs must be removed, a few at a time, until only the permanent specimens are left, when these will need the whole of the space. In the meantime the new shrubberies may be made very attractive by planting *Dahlias* and *Sunflowers* in a judicious way, so as to fill up without in the least interfering with the shrubs themselves. In very dry soils it would not be

wise to plant the *Sunflowers*, as they would rob the shrubs of too much moisture. In no case must the *Dahlias* and *Sunflowers* be planted close together, but many feet apart, dotted about here and there; then they would show to more advantage also. The *Dahlias* especially should be liberally top-dressed with rotten manure. The single-flowered and the Cactus-flowered *Dahlias* are the best to plant, but the show varieties and the *Pompons* are also suitable, especially the latter. All the plants must be first hardened, through exposure to the air in a sheltered position in the garden or a yard, from the second week in May to the end of the month, when they should be planted out, watered and staked. B.



III

A DIAMOND-SHAPED BED IS OFTEN USEFUL IN AWKWARD SHAPED GRASS PLOTS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Callas.—Now that flowering has ceased, stand the plants out of doors in a sheltered position to ripen and rest.

Hybrid Winter-Flowering Begonias.—As the young growths become large enough on the old plants, insert them in small pots in a sandy mixture of loam, leaf-mould and peat, and plunge in the propagating-pit until rooted.

Auriculas of the show and alpine varieties, after the flowers are past, should receive their annual potting. Use thoroughly cleaned, well-drained pots and a compost of good fibrous loam, with a little flaked leaf-mould, some cow or sheep manure, and finely-broken brick and coarse sand. If it is desired to increase the stock, all offsets should be detached and potted up. During the summer months give them a position shaded from the sun, but where all the light and air possible can reach them.

The Kitchen Garden.

Thinning the Crops.—This must be done before the young plants get too large. At the earliest thinning the straggling seedlings should be removed. With Carrots, if not too severely done at the first, the young roots at the second thinning will be useful for kitchen purposes. Onions, where size is not important, are best not thinned, excepting just a few pulled for use. They then ripen much better. Keep the Dutch hoe working between the rows.

Mustard and Cress.—For keeping up a supply during the warm weather, select a very shady part of the garden. Make the surface as fine as possible, sow thickly, make firm and water in with a fine-rosed can. Cover the seed-bed over with a board or anything to exclude light until well germinated. Sow little and often.

Potatoes.—As these appear above the ground, keep drawing soil around them for protection, as there is yet time for late frosts. Keep the hoe at work between the rows.

Peas.—Sow more Marrowfat varieties for succession, preferably in trenches, as then better facilities are afforded for supplying copious waterings in dry weather.

Turnips.—Make another good sowing of one of the white varieties.

The Flower Garden.

Antirrhinums.—These must be well hardened off before planting out in the course of a week or two. For bedding arrangements they are admirably suited, coming true from seed, and are also to be obtained in varying heights for different purposes and positions. The giant, intermediate and dwarf are each alike excellent, the latter especially useful for ribbon borders.

Agaves.—These should be well sponged and syringed before being placed out of doors. The same applies to Bays and Myrtles.

Window-Boxes.—Have these thoroughly repaired and cleaned, so that everything is in order for the plants when the time for planting arrives.

Border Chrysanthemums.—Plant out now in well-prepared ground. Either a mixed border or a break may be planted, putting the plants out in rows, and where many cut flowers are in request, this is to be recommended. The early-flowering varieties should always be selected, as the late ones, in the event of wet, cold weather, are not to be relied upon. The varieties are numerous, but a few of the best are Kitty Riches, Harvest Home, Roi des Blancs, Goacher's Crimson, Polly, Mme. Desgranges and its sports.

Pentstemons.—These can be planted out now with safety. A slight frost will not harm the plants, if such occurs, providing they have been hardened off.

The Hardy Fruit Garden.

Strawberries.—The beds will now require a good layer of straw to be placed round the plants. See that this is well worked round them, so that the flower-spikes are kept clean. Any runners that may be appearing, if not wanted for propagation, should be cut off.

Gooseberries.—Keep a sharp look-out for the Gooseberry caterpillar. If allowed to go on unchecked, the bushes will soon be completely defoliated. For a remedy dust with Hellebore powder, or syringe in the evening with a good insecticide. Red spider is another great enemy. Vigorous syringings and waterings at the roots in dry weather and the use of an insecticide will do much to mitigate the attacks. The mildew now so prevalent in some parts should be notified to the Board of Agriculture if there is any suspicion of its presence.

Fruits Under Glass.

Early Melons.—The earliest fruits will now be ripening, and to get the best flavour the finishing of the fruits should be assisted with a free circulation of air, drier conditions and a little fire-heat in the pipes through the night. Before going to table the flavour will be improved by the fruits being placed upon a sunny shelf.

Successional Plants.—As the fruits commence to swell and the crop is selected, support the fruits either with nets or flat, square pieces of board with a string passed through each corner. Keep a warm temperature, but air freely in the morning when the weather allows, closing early and taking advantage of the sun's rays. Water at intervals with liquid manure, properly diluted, while for a change a sprinkling of a quick-acting patent manure can be well watered in. If the stems show any signs of canker, dress the affected parts with lime. When watering, avoid wetting the stems of the plants near to the soil. While the fruit is swelling, syringe twice daily and keep the laterals removed before they get too strong.

Damping.—To keep the foliage of the occupants in houses in a healthy condition, this plays an important part. The floors, walls, borders, and especially under the pipes, should be damped at least twice daily. At this season warm houses benefit by having the floors at least damped each evening, and an occasional sprinkling of manure-water does much to quell attacks of spider.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Strawberries.—These will now come on very well in cold frames, but it is not the best practice when ventilating to do so from the upper and under parts alternately. It should be done only from the upper part, which prevents draughts and their concomitant mildew.

Cucumbers.—Plants should be prepared for planting in pits, in which they succeed during the summer months without fire-heat, provided all the sun-heat possible is caught and moisture not unduly applied. They may be planted either in large flower-pots or, preferably, in wooden trays not more than a foot deep.

Tomatoes.—These do splendidly when planted out in unheated structures. They will need hardly any ventilation for several weeks, and if the soil is in the right condition, no water need be applied till the first fruits are set. They should not be planted closer than 3 feet, and be grown on single stems, to be stopped beyond the third truss. If more is left, the fruit has not time to mature.

Late Peaches.—It will not be necessary from this date ever to close the houses, that is, if the crop is wanted to be as late as possible in ripening. The trees ought to be thoroughly washed twice daily as a precaution against red spider. It sometimes happens that trees in robust health produce fine-looking, strong shoots near the central parts. These, as a rule, are worthless, and if not wanted to fill bare spaces should be forced off. If wanted, pinch them near the base in order to cause one or more less strong but valuable shoots to break.

The Vegetable Garden.

Leeks.—Frame-raised Leeks are now large enough to plant out in narrow trenches. They will need protecting for a few weeks till established.

Curled Kale.—In the course of the next few days a full sowing of this valuable vegetable should be made. Strains vary considerably in hardiness, those

that are dark green being usually the hardier. Though many people sow much earlier, it is not essential, and when sown at this time the young plants come in right to follow Potatoes and other crops.

Endive.—If Endive is wanted in early autumn, a few seeds of a curled variety, which is to be preferred to the broad-leaved, may also be sown at the same time; but it is too soon to sow for the main winter and spring crops. Endive, unlike Lettuce, does best in rather firm soil, and should be transplanted when the seedlings are still small.

Rampion.—This, too, ought to be sown, very few, if any, plants running to flower when sown so late, and there is plenty of time for the roots to grow. The minute seeds should scarcely be covered. A deep enough depression for the seeds is produced by pressing a garden line into the smooth soil, and drawing the back of a spade over the surface serves to cover the seeds sufficiently.

The Flower Garden.

Bulbs.—Those in beds to be shortly occupied with summer-flowering plants should be lifted and laid in the reserve garden to finish growth.

The Bog Garden.—A constant supply of water must now be provided for bog plants, which are growing very rapidly. Some plants, e.g., Forget-me-not, Sagittaria and Bogbean, grow so rank that unless they are curtailed at the beginning of the season, the less pushful plants are crushed out of existence. Others, such as Primula japonica, produce so many seedlings that it is necessary to treat them almost like weeds.

The Wild Garden.—Sweet Cicely (Myrrhis odorata), Polygonatum, Holy Thistles, Bocconias and others are now furnishing this special garden. It is to be noted that it may be too wild, and, as in the bog garden, a judicious thinning out of those which would otherwise encroach on their neighbours must be made from time to time. Nor should common weeds be permitted to obtain a footing.

Climbers.—These quickly get entangled if left to Nature, while if occasionally attended to, so that the shoots are made to take the proper direction and superfluous ones removed, the general condition of the plants is improved. Many of the wickuraiana Rose varieties produce far too many shoots from the base, and now that it is possible to pick out the best, the others may be broken off before they become set. Banksian Roses are showing an abundant bloom, but these are not so profuse in pushing new shoots, and therefore all that do push should be preserved and duly trained.

Rosa hemisphaerica.—This very old but beautiful species has obtained a dubious reputation, on account of its obstinate refusal to carry flowers. Here it flowers profusely, and at the present time the long shoots have to be denuded of a large number of buds to strengthen those that are left to expand. Its other requirements consist in cutting out the flowered-out shoots and thinning the weaker of those of the current year's production.

The Plant-Houses.

Ficus repens is a capital plant for covering walls of stoves, but it must be trimmed frequently to keep it neat. There is a small-growing variety of this.

Deutzias.—The value of the common *D. gracilis* for greenhouse decoration has long been recognised, and it can now be supplemented with many distinct and pretty forms, such as *D. Lemoinei compacta*, *D. gracilis venusta*, *D. Vilmorina* and *D. Boule Rose*. They vary considerably in habit, but all are useful. Long shoots can only be produced by hard pruning after flowering.

Pelargoniums.—The earliest of these showy plants are now coming into bloom, and it would be advisable to subject them to a mild fumigation before the flowers open. Given a sufficient supply of water at the root with manure, aphid will not be troublesome. Propagation may successfully be carried out now with flowerless shoots, which root freely, one cutting in a 2½-inch pot. They require a little higher temperature than that of a greenhouse, and very little water till roots are produced. These grow into very nice plants for flowering the following year.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

BOOKS.

Turner's Water-Colours at Farnley Hall.—

Those of our readers who appreciate good pictures will be familiar with the many beautiful oil-paintings by Turner that are to be found in the National Gallery and the Turner Gallery at the Tate Gallery; but his water-colours, of which there are a considerable number in existence, are not nearly so well known, mainly because the



A TERRACE GARDEN IN THE MAKING BY MESSRS. WALLACE AND CO. AT THE FORTHCOMING INTERNATIONAL EXHIBITION. IT COM- PRISES AN OLD ENGLISH GARDEN, LILY POND AND A CASCADE.

best are in private collections. At Farnley Hall there are nearly two hundred water-colours by this famous artist, and the present owner, Mr. F. H. Fawkes, has kindly placed these at the disposal of the editor of the *Studio* for reproduction. Thirty pictures in all are to be published, in five parts, each part to cost 2s. 6d. In Part I., which we have before us, we find Bonneville, Savoy, an exquisite piece of mountain scenery; The Valley of the Wharfe from Caley Park; The Valley of Chamounix; Scarborough Town and Castle: Morning; Boys Collecting Crabs; and Interior of St. Peter's, Rome. These reproductions are exceptionally good. Each plate measures about ten inches by seven and a-half inches, and the sunk mounts 16 inches by 14 inches. The respective parts are to be published by the *Studio*, 44, Leicester Square, London, W.C.

The Gardener and the Cook.*—The authoress of this book has conveyed much very useful information in a most charming style. Every item of information is, as it were, served to the reader, with a few words of complement. There is no serious attempt made to give cultural hints on the different vegetables and herbs dealt with in the book; but some references to the vegetable and fruit garden are very instructive. For example, the authoress says, referring to the cultivation of Mushrooms, "Our Mushroom-bed is made up in a shed that covers a north wall, and is on a slope. It is a dry, well-built shed, and is only used for storage of roots. The bed itself is made of horse-droppings intermixed with loam. . . . It is watered with a fine rose and rain-water, frequently enough to keep it moist; for do not the ordinary field Mushrooms come best in a damp season? They will not flourish in a dry soil, or when they are cold, and it is of no use attempting to make them do so. . . ." The chapter on salads is very interesting and instructive; but

here, again, it is not of their culture, but of the preparation in the kitchen that the information refers to. Herbs and their uses are ably dealt with; and the chapter about recipes and the use of butter should be well studied by the cook. The authoress speaks of Lettuces, Cos or Cabbage, cooked, and says, "One of the nicest dishes we can have in summer is that of Lettuces stewed in broth and served hot with a garnish of Green Peas or young Beans. After being washed and cut

into half, the Lettuces are thrown into boiling water with salt to blanch them, then lifted out and drained. . . ." The whole process is simple and interesting, and the reader will find that the foregoing quotations from the book are a sample of many paragraphs written in an equally delightful style. The distinction between plainly-cooked and plainly-dressed vegetables, with the *raison d'être* of sauces and dressings; of tender greens, of Gourds, Marrows and their kind; of Celery, Artichokes and Potatoes; the treatment of Beans and dried vegetables; of Corn, Rice and Italian pastes; fruit for the table, the store-room and closet; preserves, jellies, bottled fruits,

pickles, wines and cordials, are all dealt with. The black-and-white illustrations add interest to the book, which should be read by all housewives and others responsible for the preparation of vegetables and fruits for the table.

Oxford Gardens.*—All students of history and our ancient monuments owe a debt of gratitude to the author of "Oxford Gardens" for the excellent account he has furnished of the famous Old Physick Garden and the other various College gardens of Oxford. England's oldest existing botanic garden was founded as long ago as 1621, which the author points out upon what appears indisputable evidence is a decade earlier than most writers fix its foundation. To thoroughly appreciate the part played by this classical institution in early botanical science in this country, one needs to carry his mind back in review of the period about which it came into existence and note the wonderful impetus that science received during this century, when, having emerged from the devastating effects of the Civil Wars, its learned men settled down to the pursuit of those subjects whose victories are more glorious than its wars. It was during this period that we get the foundation of the Royal Society by Bishop Wilkins, also at Oxford. Hooke was at work improving the microscope; Boyle, the air-pump. John Ray raised zoology to the rank of a

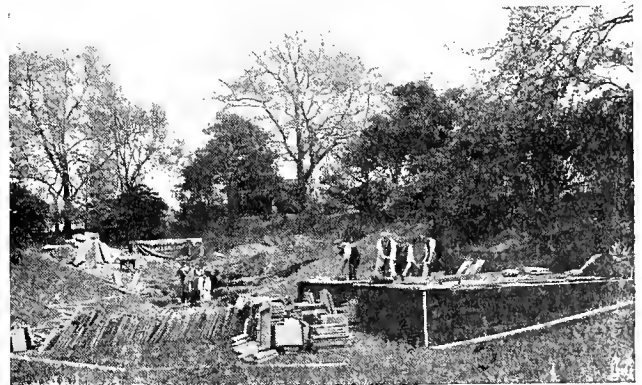
* "Oxford Gardens," based upon Daubeny's Popular Guide to the Physick Garden of Oxford: With notes on the gardens of the Colleges and on the University Park, by R. T. Günther, M.A., Fellow of Magdalen College, Oxford. Price 6s. net. Oxford: Parker and Son. London: Simpkin, Marshall and Co.

science, while his "History of Plants," coupled with the work of Robert Morison, the first Professor of Botany at Oxford, may be said to be the foundation of modern botany. To Nehemiah Grew and Malpighi, who divided the honours, may be ascribed the foundation of the study of vegetable anatomy.

The historical part of the book is very fascinating, and gives interesting details about its famous professors, many of whom have left their mark on botanical science, as will be realised when, besides Morison, already mentioned, names are recalled such as Sherard, the founder of the Chair of Botany; Jacob Bobart, the younger; Dillenius, the author of the classical work, "Hortus Elthamensis"; Sibthorp, father and son; Daubeny, the beloved of his students; Bayley-Balfour, who now presides with such distinction over the Edinburgh Garden; and the present holder of the professorship, Dr. S. H. Vines.

The work is well planned, and has chapters on the trees, shrubs and wall plants, which contain interesting details of famous trees; and on hardy herbaceous plants, which describe the various arrangements which have existed in the garden and the plan adopted at the present time, with a description of the various Natural Orders, which students to-day must find of great value. Hardy aquatics, for which Oxford has been famous from the time of the elder Bobart to our own day, are also dealt with. The transition of the greenhouses is also described from the very earliest time, when the greenhouse was nothing more than a dignified barn with massive walls, which were, no doubt, useful in absorbing the sun's rays during the day and radiating them out during the night. A very crude method used in heating the greenhouse during frosty weather is shown in a figure of a four-wheeled open iron waggon, which was filled with burning charcoal and drawn through the house by the gardener. What a contrast to the present light modern structures with their efficient methods of heating!

The contents of each of the present greenhouses are well described, and mention made of the various



MESSRS. PULHAM AND SON'S ROCK AND WATER GARDEN IN THE MAKING AT CHELSEA. THIS DESIGN EMBRACES A SERIES OF WATERFALLS AND A MORAINÉ GARDEN.

economic and other uses of the plants. Special mention may be made of the Water Lily House, the occupants of which and their cultivation by the present curator have brought great credit to the garden. How thorough is the work of the author may be seen by the inclusion of chapters on the weeds and wild plants, the botanical museum, library and laboratories, which detail

* "The Gardener and the Cook," by Lucy H. Yates; price 3s. 6d. Constable and Co., Limited, London. 1912.

the origin and varying fortunes of each. Lists of plants growing on the various walls are given, which makes the work a useful guide-book. There are a few misspellings of plant names, which will, no doubt, be altered in future editions. The last part of the work chiefly deals with the trees in College gardens, and contains an excellent index, which facilitates ready reference.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

VIOLET SPOT DISEASE (B. A. I.).—Various causes produce spotting of Violet leaves; but if, as seems possible from the symptoms you describe, the spotting is due to a fungus, probably the best treatment (always provided a sufficient circulation of air is provided for) is to spray the plants, say, once a week, with a solution of loz. of potassium sulphide in three gallons of water.

SUMMER BEDDING (M. T.).—The only yellow-flowered plants we recall suitable for association with the Salvias as bedding plants are tuberosus Begonias of that shade. You might, of course, have raised yellow-flowered Antirrhinums by special culture, and these latter, indeed, would be the more suitable. Such colour combinations as these require to be prepared a long time in advance, and to be worked up to accordingly. At this date the Antirrhinums may not be obtainable; hence the Begonias, a profuse-flowering race, would be the best.

VIOLETS (E. W.).—If you require a single-flowered variety of the largest size, you cannot do better than purchase Princess of Wales or La France, either of which is good, the last-named having the largest as well as the darkest-coloured flowers. If, on the other hand, a flower of smaller size would suit, we should recommend well-siana as a good variety, free and very profuse as well as fragrant. Lixonne is also good. Comte de Brazza (white) and Countess of Caledon (lavender blue) are the best of the doubles. The class of plant you require is a well-rooted layer or runner as the season is advancing. On no account be tempted to plant old divided stock, as such material is rarely satisfactory. The ground should be deeply cultivated and rich without undue grossness. The planting should be firmly done and the plants kept from weeds and insect pests, red spider being the worst throughout the growing season.

PEONIES (W. D.).—If the plants were clumps, whether of small or large size, and you planted them intact, you did wrong, and you are reaping as you have sown. The Peony is not a plant to be trifled with. It has a way of its own, and cultivators must, to use a slang phrase, "cotton to it" if they would succeed. The fairly good flowering you had last year was due to the elaborated sap and bud development of a previous year—the thicket of weakened shoots, to which you refer, the outcome of a cultural error you have not confided to us. You can do no good by diminishing the number of these weakened shoots, and it may take years and drastic measures meanwhile before the plants recover. Cannot you give us some further particulars? If so, we may advise you in more definite terms. In any case, let the plants severally alone. The Peony is very impatient of interference at any time, and, when disturbed, certain methods should be adopted if success is to be assured.

POLYANTHUSES FAILING (E. E. F.).—The fault is with the soil, which was teeming with millipedes and much other insect-life of a microscopic nature. Slugs, too, and that most voracious of all, the black slug, were noted. The roots of the plants were quite destroyed. Treat the soil generously with lime, or give a dressing at once and fork it in of any of the advertised soil fumigants. In other ways avoid planting the same crop in the same place each year, remembering that a change of soil to the plant is as clean linen or change of air to human beings. Finally, in so far as the Polyanthus is concerned, raise seedlings

each year, and so always endow your plants with the vigour and freshness of youth.

PEONY BUDS AND ANTS (Hal).—The exterior of the buds of most varieties of Peonies are of a viscid nature, and in all probability the ants find something in it to suit their tastes. It may also be that insect-life in some form is present, and that this constitutes the greater attraction. We have grown Peonies largely, however, but have never experienced disaster from this particular pest. Ants may be kept at bay by the use of carbolic acid in water about the plants, and by dusting the soil with some of the soil fumigants now advertised. Place a little Vaporite in the runs of the ants, or sown thinly over the soil it has a deterring effect. In all probability your Peonies have suffered not from the attacks of ants, but either from frost or the prevalence in some seasons of a fungus which attacks the stems a little below the flower-buds. As you give us no definite information respecting the damage, we can form no opinion thereon.

TREES AND SHRUBS.

PLANTING CAMELIAS (P. M. S.).—Camellia trees may be obtained from Messrs. William Paul (Waltham Cross), Limited, The Royal Nurseries, Waltham Cross, Herts. The present is a good time to plant them, especially if they are obtained in pots. Before planting, be careful to prepare the ground well by trenching, and if heavy, by adding lighter soil. Whether the soil is heavy or light, the trees will appreciate a little peat placed about the roots at planting-time.

PRUNING A RHODODENDRON (A. E. P.).—The present is the best time to cut a Rhododendron hard back. You may prune the branches back into old wood, for, as your plant is growing in a pot, you can place it in a warm and moist house to encourage new growth. After cutting back, keep the branches well syringed several times a day. This will encourage dormant buds to break into growth. Do not disturb the roots of the plant at the present time. Should any rotting be necessary, leave it until the new shoots are 1 inch or 2 inches long.

TREES AND BRACKEN (A. M.).—The following kinds of trees would be suitable for your purpose: Sycamore, common Elm, common Oak and Beech. Early spring, February or March is a good time to undertake the transplanting of Bracken. You must, however, be prepared for disappointing results, for although Bracken makes itself a pest in many places, and rapidly covers the ground where it is not wanted, it is sometimes most difficult to establish it elsewhere. The best plan is to obtain large turves containing Bracken rhizomes, and plant them bodily in the place where the effect is desired. The most satisfactory time to transplant Oriental Poppies is autumn, winter and early spring. They would not be likely to do any good if moved now. You cannot do better than plant the following subjects against your wall with a northern aspect: Crataegus Pyracantha, Ampelopsis Veitchii, Jasminum nudiflorum and Celastrus articulatus. Ivies of various kinds are, of course, the most satisfactory plants for north walls; but those you object to.

FRUIT GARDEN.

INJURY TO GOOSEBERRY BUSHES (W. J. C.).—There is no disease of Gooseberries likely to produce the result of which you speak. If birds are the culprits, you will find the bud scales, as a rule, still left on the branches, while all the soft parts of the bud have been destroyed. It is probable that birds have been at work. Black cotton, threaded over the bushes during the winter, is often a good preventive of damage of this kind, and delaying the pruning until February is also a good measure. Limiting the bushes may also be carried out with advantage.

PEACH TREES DROPPING FLOWER-BUDS (L. H. R.).—Seeing that you have been successful in the growth of your trees in pots for some years, it is not easy to give a reason why they have failed this year, without seeing the trees and knowing something of the local conditions under which they are grown. There have been many complaints this spring of Peach and other fruit trees in pots, as well as pot-forced Strawberries, and even Grapes in established borders, proving to be in a poor and unsatisfactory condition in consequence of the great heat and long-continued drought of last year having exhausted and weakened the trees. We suggest that this may be the cause of the failure also in your trees. If so, it may prove not to be an unmixt evil, as during the rest from carrying fruit the trees will have will, no doubt, greatly benefit them for next year's fruiting.

PEACH BLOOM DROPPING (Tudor).—The cause will very likely be found in keeping the plants too warm in winter. Trees at this time should be kept as cool as possible. One seldom or ever finds the blossom fall from trees grown on walls in the open air. Possibly the roots have also been too dry at one time or another. Dryness at the root is fatal to the well-doing of a Peach tree; or it may be that your soil is deficient in lime, or perhaps the drainage is at fault. (2) The most common cause of late Pears shrivelling is because they are gathered too soon. Keeping them in too warm and dry a place will have the same effect. (3) The Cherry you mention would succeed very well in the position. It would be better to plant two fan-trained trees, one on each side of the window, rather than cordon trees, as the Cherry succeeds best when permitted to grow without too much restriction. *Re Pear blossom.*—Yours must be a fine sight. We hope you escaped the destructive frost of Friday morning, April 12, 17, in some places, which completely destroyed Pear and Plum tree blossom.

KITCHEN GARDEN.

ASPARAGUS-BED GONE WRONG (Asparagus).—There are so many causes which may be accountable for the failure of Asparagus-beds that, in the absence of some particulars to guide us to a conclusion, it is difficult to give an answer which may prove useful. You say the position is low, and possibly the ground cold and not too well drained, and the soil perhaps heavy as well. These conditions, if present, are sufficient to account for the trouble. A frequent cause of failure is cutting the "grass" too hard and for too long a time. If this is persevered in for a few seasons, it will soon prove fatal to the Asparagus. You will know whether this has been the cause in your case. In cutting Asparagus the best way is to cut all the grass that comes, large and small, until June 20, when cutting must be stopped altogether for that season. The best thing you can do is to give the bed a dressing of bonedust at the rate of a small handful to the square yard. Do not cut hard this summer, and not at all after the above date.

CUCUMBERS AND ARTIFICIAL MANURES (Scots).—As a top-dressing for Cucumbers planted out in beds in the ordinary way, for the purpose of encouraging roots, we know nothing better than the following: To one peck of good virgin loam, passed through a 1-inch meshed sieve, add a gallon of fresh horse-manure (passing this through a sieve in the same way), three-parts of a pint of bone-meal, and about the same of soil. Mix well together and place firmly over the bed half an inch deep, having previously taken off some of the old surface soil. Liquid manures.—The best results are obtained by occasionally varying these. One of the best is Fernvian Guano, dissolving half a pint in two gallons of water. Pearson's, Clay's and Thomson's manures are excellent for this purpose if carefully applied according to instructions as to quantities to use. Soot-water is excellent used in the same proportion as the guano, as also is the liquid from stable and cow yards when sufficiently diluted. Our experience in the use of liquid manures goes to show that they are generally used in too strong a solution, with a weakening instead of strengthening effect on the plants to which they are applied.

TO MAKE AN ASPARAGUS-BED (A. S.).—The Asparagus loves a deep, rather sandy or open loam to grow in, because such soil is always well drained and warm; but any soil can be made to grow Asparagus, provided the labour and expense of preparing the ground is not begrudged, and it should not be, as, once a bed is well formed and planted, it will remain in profit for a lifetime if well looked after. Cold, heavy, wet soil is the worst for this plant. We will take it for granted that your soil is ordinary, well-drained garden soil. An Asparagus-bed should be 4 feet wide, with a path or alley on either side each 2 feet wide. It will thus take a piece of ground 8 feet wide to form an Asparagus-bed; but if two beds are formed side by side, 6 feet more only is required for the next bed, as the one alley will answer for one side of each bed. Let the land be trenched 2½ feet deep (the alleys to be trenched as well, as the Asparagus plants will soon root into them). In trenching keep the poor soil to the bottom, and keep a wide trench open while trenching proceeds (at least 18 inches). Into every trench should be placed a liberal quantity of rich farmyard manure. The soil cannot very well be too rich as long as the manure is well mixed with the soil. There should be at least a full earload to every rod of ground, including the alleys. Having finished the trenching, mark out your bed or beds, each 4 feet wide, and then lay the Asparagus roots on the surface of the soil (not planted in it). There should be three rows of plants to each bed—a centre row and one on each side of it, at 15 inches apart. There should be 10 inches between plant and plant in the row. Conover's Colossal is one of the best varieties. One year old seedlings are the best to plant. Keep the bed free of weeds during the summer, give it a light dressing of partly-rotted farmyard manure after the grass is dead, and clear it away in the autumn. Do not cut any young grass until the third year after planting.

MISCELLANEOUS.

CLIMBERS AND GARDEN SWING (F. H. R.).—You will find Crimson Rambler the best Rose to train on the poles you describe. The wichuraiana varieties would be less suitable on account of their rampant growth. Do you not think, however, that the spines of the Roses would be rather dangerous for children playing in the vicinity, especially during summer, when the plants were growing fast and the swing in regular use? To our mind Clematis Vitalba would be a more suitable subject for the position. It grows well almost anywhere, and will stand wind.

HELIOTROPE FOR INSPECTION (Five Years' Reader).—We can detect nothing radically wrong with the shoots of Heliotrope sent; but, judging from their drawn and attenuated appearance, they have evidently been grown of late in too high a temperature. A minimum of 50°, running up to 60° during the day, is very suitable for Heliotrope during the winter months. To get rid of ants, pour boiling water in every crevice where they take shelter; that is, when it can be done without injury to the roots of any plants. Next, they can be trapped by smearing pieces of sponge with treacle, and when these are covered with insects they may be dropped into boiling water. Bones are also effective as traps, and may be treated in the same way. For the destruction of beetles you may employ Beetlecure or phosphorus paste, or they may be trapped by putting a little beer or sugar and water into deep earthenware dishes, into which they will get, and are then unable to extricate themselves. Care must be taken to place a few pieces of wood leaning against the dish in order to allow the pests easy access. Keating's Powder, too, will stupefy the beetles, and it is not injurious to the roots of plants. In any case, perseverance is an important factor in getting rid of both of these pests.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W. C.

NOTES OF THE WEEK.

To Our Readers.—In this special issue, which is more than twice the ordinary size, will be found a comprehensive descriptive report of the great Royal International Horticultural Exhibition. In a show of this magnitude, where there are over one thousand competitive exhibits, as well as over a hundred non-competitive groups, it is obviously impossible to report it in the ordinary way, so we have adopted the plan of giving descriptive illustrated articles of each section. Next week we hope to publish particulars and illustrations of the new plants which receive awards or certificates. Those readers who have gardening friends abroad should post them a copy of this week's issue. We shall be pleased to welcome readers at our kiosk, which is in the central avenue of the exhibition grounds and opposite the administration offices.

Adenocarpus anagyris.—This is a rare plant and a conspicuous evergreen, and the habit of growth and the manner in which the leaves clothe the growth arrest attention. It is a fast grower, attaining 6 feet to 8 feet in about three seasons. The flowers are a golden yellow. The plant can be easily raised from seed.

The Japanese Orange, Limonia trifoliata (Ægle sepiaria), is very striking and beautiful just now; it is covered with a mass of white flowers, which later on produce small Oranges. The branches are armed with long spines, and these give it a very conspicuous appearance when in bloom. It is not at all particular as to soil, growing in ordinary heavy soil or that of a light nature. It likes plenty of water, particularly in dry weather.

A Showy Japanese Crab Apple.—Should a showy bush or small tree be required for the shrubbery or lawn, no mistake can be made if the Japanese *Pyrus floribunda* is selected, for it is aptly named, as no tree blossoms more profusely or more regularly. Very often met with from 12 feet to 15 feet high, it forms a wide-spreading head upwards of twenty feet in diameter, with branches sweeping the ground in all directions. The rose-flushed flowers appear during late April and early May, and they are in such profusion as to almost hide the branches. A variety called *atrosanguinea* may be obtained. This is recognised by its rich red flowers, which are even more noticeable than those of the type. Where space is available, a pretty effect may be produced by forming a group of the two forms. Such a mass is to be seen at Kew occupying a mound, with a few taller-growing conifers, near the Water Lily House. In another part of the Gardens a clump of the same *Pyrus*, with groups of Pheasant's-eye Narcissus beneath, is also very attractive.

The Horticultural Club.—A special meeting of the club was held on Tuesday, May 14, to hear a lecture on the Canadian Rocky Mountains by Mrs. Henshaw. The attendance numbered upwards of fifty, including many ladies. Mrs. Henshaw took her hearers on many expeditions, and illustrated by beautiful language and scores of exquisite slides all the features of interest. It was a gathering of remarkable success, and all present were heartily grateful to the speaker for coming among them. The chair was occupied by the president of the club, Sir Frank Crisp.

A Beautiful Honeysuckle.—*Lonicera alpigena* belongs to the bush section of the genus, and is easily distinguished from other members of the same group by its upright habit, intensely hairy leaves and showy inflorescences. A native of the European Alps and the Himalaya, it forms a shapely bush 6 feet or 8 feet high and as far through, clothed with ovate or obovate leaves, which are densely covered on the under surface with soft, velvety hairs. They vary from 2 inches to 4½ inches long and from 1 inch to 2 inches in width. The flowers are borne in pairs from the leaf-axils, each two flowers being enclosed by a pair of large red bracts. The flowers are orange-coloured, tubular, half an inch to three-quarters of an inch long and hairy. The bracts are persistent after the fall of the flowers, and gradually take on a deeper colour, so that when the black fruits are ripe in August they are deep red. Growing freely almost anywhere, it is an excellent shrub to place in a mixed shrubbery, while there are many less ornamental subjects which occupy prominent positions as specimen plants.

Conferences at the Royal International Horticultural Exhibition.—Two important conferences will be held during the International Exhibition at Chelsea on subjects connected with horticulture. Both will be presided over by the Right Hon. A. H. Dyke Acland, chairman of the science and education committee, and will be held in the Recreation Hall of the Chelsea Royal Hospital. Admission is free, and all interested in the subjects are cordially invited to attend. Those attending the exhibition may enter the conference hall from the exhibition grounds (gaining re-admittance to the exhibition by the same means). Those not attending the exhibition may enter the conference room from the Royal Hospital entrance. The first conference will be on Thursday, the 23rd inst., at 2 p.m., the subject being "Horticultural Education." The second conference is arranged for Friday, the 24th inst., at 9.30 a.m., on "Legislation in Connection with Plant Diseases and Pests." Reports are being prepared by the science and education committee on the present condition of both horticultural education and legislation against plant pests, and will be printed with the papers and discussion.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Fritillaria Meleagris.—I was pleased to see the Soake's-head Lily figured in *THE GARDEN* for May 11, page 231, as growing; but I think it is not nearly enough known and appreciated as a cut flower for the house, where it shows to the greatest advantage. I frequently use it in this way, and find its quaint shape, colours and marking always attract attention and admiration. It makes a dainty table decoration in Venetian glass, which suits it best of all; but as this is not generally obtainable, the next best is, I think, bronze Bretby ware.—AN AMATEUR.

Cottage Tulip Grenadier.—Some years ago Messrs. Wallace and Co. of Colchester put a beautiful collection of new seedling garden Tulips on the market, of which I consider Beau Brummei, Marksman and The President to be the pick. Grenadier, I believe, comes from the same source, and is a great beauty. Like Mrs. Berkeley, of which I was kindly given a bulb two years ago, it is an immense rich orange scarlet self, with a striking yellow base, of medium height. I measured one of the blooms at Vincent Square, and it was 4 inches long. It received a unanimous award of merit from the Narcissus and Tulip committee on April 30.—J. JACOB.

Coronilla glauca Outdoors.—This plant, about which several notes have recently appeared, thrives out of doors here. Enclosed is a photograph of one planted in October, 1909, from a thumb pot. It is now 5 feet 6 inches high, and has a spread of 6 feet 6 inches. It has had no protection during the winter and has been in full flower since January last and is only now going off.—R. COTTON, *Llwynon, Llanfair P.G., Anglesey.* [Unfortunately, the photograph was not sharp enough for reproduction.—ED.]

— I notice in *THE GARDEN* of April 20, page 189, and May 11, page 226, notes on *Coronilla glauca* flowering outdoors. My employer, the Right Hon. A. H. D. Acland, has one in full bloom on a west wall. It has been in bloom since December more or less, and is now a sheet of yellow. It is 7 feet high and about four feet wide. We have also a bush 2 feet high and about three feet through on a south border. These have had no protection, and appear quite hardy. It is a most desirable shrub. Mrs. Acland thought this might be of interest to your readers.—G. BATTY, *The Gardens, Dunkery House, Felixstowe, Suffolk.*

Fruit Trees for Garden Effect.—Your correspondent Mr. Wakely, page 215, issue May 4, raises a very interesting and sensible question about planting fruit trees for floral effect. Well-blossomed fruit trees are, I think most people will admit, magnificent sights, whether in small or large gardens. I can see as much real beauty—more, in fact—in a nicely-laden Apple bush of pink and white flowers, or a Pear with creamy white, than in many of our extolled usual garden plants. Coupled also with the pleasing show of the fruit blossoms is an ingratiating fragrance such as many border or pot plants never yield. For two or three years past we have, at Ken View Garden, Highgate, practically adopted the "effect" method with bush Cherry trees, not because the fruit is not wanted, but on account of the difficulty in protecting the trees from the birds when the fruit is ripening. Having attained rather

large proportions, the trees are not easy to net; consequently, very few Cherries reach maturity. But the trees are to be kept for their floral spring loveliness. Of course, I am not suggesting we need not trouble about fruit.—C. TURNER.

Choisya ternata.—I was much surprised just recently to meet with a very large specimen of this sweet-scented evergreen shrub growing in a somewhat cold, exposed position in our public gardens here. It is evident that when planted it was done in an error or sort of chance that it might live or die. In any case, no other one is in all the gardens. When introduced here from Mexico early last century, it was treated as a stove plant; but for many years, planted outdoors, it has been so done in very sheltered positions, usually on the south side of buildings. I regard the example I refer to here as showing that it is really quite hardy, and should have a position in the shrubbery of full exposure. The plant, which has been for some time literally a mass of pure white flowers that emitted very rich perfume, is some six feet in height and seven feet through. As seen here full of hard wood that bears no evidence of injury from weather, I should regard this *Choisya* as one of the very finest of all our early-flowering shrubs.—A. D., *Kingston.*

Showing English Daffodils in America.—I read with great interest in the Rev. Joseph Jacob's "Daffodil Notes," page 208, April 27, "What About America." Once again this well-known gentleman has given a most valuable hint to Daffodil raisers and growers in pointing out a new opening for this lovely spring flower. The taking of a collection such as we often see at the Royal Horticultural Society's Hall would create surprise and find new roots in the hearts of the Americans. I think the difficulty in getting the flowers across the Atlantic can be overcome. The varieties selected should be well watered, which will help to strengthen the flowers. Shade them well even before there is any sign of the flowers showing colour. Cut them very young, as we all know they will fully develop in water. Tie three flowers together, get some damp moss and cover the stems from bottom to top about one inch off the flowers, and about one inch off the bottom, fasten it with raffia, and then get some paper and place it over the moss so that the damp does not strike the flowers. I should be glad to hear more on this important subject.—J. SHNEIDER, *Bewdley Hill, Kidderminster.*

Roses with Beautiful Foliage.—I think Fellenberg should take its place among the Roses valuable on account of their decorative foliage. It has many other virtues. I have a bed of it this year making promising and beautifully-coloured growth. May I add how much pleasure Mr. S. Arnott's note on *Fritillaries*, page 231, issue May 11, gave me. I have groups in my wild garden which are always much admired, and especially one rising from a carpet of white Periwinkle. They have the merit of constancy. I have one or two bulbs, white, which were collected near the Thames by a friend nearly twenty years ago, and which come up every spring in an uncared-for part of the garden with astonishing persistency.—ELLEN E. STEVENSON, *Stoke Poges.*

— The very interesting article on this subject and the comments on Mr. Darlington's paper on page 228, issue May 11, will cause many readers to reflect deeply on the subject. Both hews, foliage and wood of some of our cultivated Sweet Briars are very beautiful in combination, and I have used them largely

on pillars in the garden. The side branches, when cut and placed in tall vases as soon as the fruits are fairly well coloured, look charming. I used to cut back the side shoots freely every year in this way. Another lovely Rose, Mme. Berard, yields many flowers in the autumn, and at the same time the young foliage is exquisite. If placed in water in a dark cellar for one day and night, it will remain fresh much longer than if cut and placed in the vases forthwith. The foliage of Dorothy Perkins in some seasons is very beautiful, and may be cut at times with clusters of late flowers.—SHAMROCK.

Exhibiting Daffodils.—Perhaps as an exhibitor of long standing, I may give my experience on this subject, for what it is worth. It is no easy matter to cut and pack and bring 1,000 or 1,500 blooms to an exhibition across the (it may be stormy) sea, and subject to railway vibration and the tender mercies of railway porters, and, worse than all, cartage. Mr. Watts, in his letter in your issue of May 11, displays considerable irritation over the paper collars often used by exhibitors to protect their flowers in transit. Incidentally, he pays far too high a compliment to these harmless devices. No paper collar on earth, or even a cast-iron one, will prevent a weak or unsubstantial flower from buckling, and I make a present of the device to all possessors of these undesirable flowers. But what a paper collar may do is to enable the possessor of one or two blooms of some excellent flower which he deservedly prizes, and for which he may have paid a good deal of money, to get them to a show in proper condition and truly representative of the plant. If there are enough flowers of a variety—five or six—they, to some extent, protect one another; but the solitary bloom of one precious seedling is a very different thing, and needs special care and skill in packing, and this is where a paper collar or other similar device comes in, to preserve, not to create, the flower's substance. When flowers have to lie, perhaps for twenty-four hours, in a box exposed to all the adverse conditions I have named as incident to travel, a florist has a perfect right to protect his wares in any way his ingenuity may devise. Florists tie up their flowers when shown in pots with stakes and all sorts of contrivances to mitigate the damaging effect of railway vibration and cartage, and the exhibitor of cut flowers has a perfect right to do the same. Nor do I perceive of what use a "pronouncement" on the subject would be—definite or indefinite—unless an "inspector of boxes," or, rather, an army of such inspectors, were appointed to see that every flower was so packed as to give it a fair chance of being destroyed in transit. The subject of tasteful arrangement is a difficult one, and I personally think if the arrangement does not fall below a certain standard of merit, it had best be left out of consideration in the smaller classes of competitive awards. If an exhibitor brings really fine flowers to a show, I do not think he should be penalised because after a night journey, perhaps, or the very early rising that shows necessitate, his arrangement of his flowers is not quite perfection. I confess my sympathies go out in no small measure to the poor flustered exhibitor who is between the Scylla of price and the Charybdis of classification, and, moreover, has to reckon with some accident which at the last moment obliges him to substitute another flower for one he had intended to stage, and of which he has forgotten both the price per dozen and the classification.—F. W. CURREY.

The Netted Willow.—The note in THE GARDEN, page 213, issue May 4, on *Salix sesquiteria* reminds one of the uses of some of the dwarf members of the genus in the rock garden. The native *Salix reticulata*, for example, is a pretty subject for the shady or, for that matter, the sunny parts of the rock garden in any place where small creeping plants of pleasing foliage are required more than flowering plants, as the garden should have room for both. In *S. reticulata* we have a close-creeping shrub, rising only 1 inch or 2 inches high and having pleasing little roundish leaves, all charmingly veined in a pretty system of reticulation. The little catkins are on long stalks. Although a native of the high mountains of Scotland, it is quite a good plant for the lowlands, and appears to grow in either dry or moist soil.—S. ARNOTT.

Manures to Deepen Colour in Roses.—All who grow Roses in pots and under glass know how difficult it is at times to obtain blooms of the correct colour. Some varieties, especially the yellows, are apt to come very pale in the early stages. *Pelargonium*-growers find sheep-manure a very excellent stimulant, and Rose-growers are also proving this manure to be very good indeed applied as a top-dressing or in liquid form. Most of the older growers relied upon soot in liquid form as an aid to colour, and this, in combination with cow-manure, is still one of the best compounds for stimulating Roses; but I would strongly advise a trial of sheep-manure if it is available. It can be applied in a far more liberal quantity than guanos and such-like, and is much safer to use.—P.

The Century Plant at Kew.—As if to celebrate this eventful year, the largest Agave at Kew has taken the bold step of producing a magnificent flower-spike. It is indeed a bold step and a final one, marking the close of the history of this stately specimen. After flowering its purpose in life will be nearing completion, and the plant will assuredly succumb. Other Agaves lay claim to the title of Century Plant from the fallacious supposition that they flower once in a hundred years, *Agave americana* being the best-known instance. The specimen under notice is that of *Agave atrovirens*. The immense flower-spike is over twenty feet high and is still growing. The thick, fleshy leaves compose a gigantic rosette. The leaves are broad and some six feet in length, each terminating in a formidable spine about two inches long. The species is a native of Mexico. It was introduced in 1860, and is synonymous with *A. salmiana*.

FORTHCOMING EVENTS.

May 27.—Bath Gardeners' Debating Society's Meeting.

May 28.—Wood Green Horticultural Society's Meeting.

May 30.—Manchester and North of England Orchid Society's Annual Meeting.

June 1.—Société Française d'Horticulture de Londres Meeting. Bradford Paxton Society's Meeting.

THE FLOWER GARDEN.

SOME INTERESTING HARDY PRIMULAS.

***Primula cockburniana*.**—This is a Chinese Primula, perennial in its native habitat, but in this country it is difficult to grow as such. It generally dies after flowering, but, given suitable position and soil, a few of the plants may survive from year to year. As it seeds freely and the seed germinates well, it is better to treat it as a

***P. deorum*,** from Bulgaria, is also a bog plant, probably given a good name to help it through life. In my opinion this Primula is not worth the trouble of growing. It is rather rare, expensive to purchase and difficult to grow. The scape, which is from 5 inches to 6 inches high, carries a unilateral, slightly drooping umbel of five to ten flowers of an intense purple violet colour.

***P. Parryi*,** from the Rocky Mountains, is very hardy and superior in every way to *deorum*. It is easily grown, thriving well in the open ground. The scape is from 8 inches to 16 inches high, erect, robust and carries a simple, many-flowered umbel of bright purple, yellow-eyed flowers. Both *glutmosa* and *deorum* should be left alone by the beginner.

Morclands, Duns. JOHN MACWALT.

TULIP NOTES.

Anarchism in Tulipdom.—I must have my annual growl about the naming of Tulips. Every firm and man and woman is a law unto themselves in this respect. Why on earth one firm should buy *Yolande* and then call it *Duchess of Westminster*, and another Mrs. Potter Palmer and call it *Fashion* (as if the Cottage Fashion was not enough), and a third *Goudvinek* and re-christen it *Golden Bronze*, I cannot imagine. This is a sample of what I mean among Cottages and Darwins, and it is just as bad with the early varieties. I happen to know very many of these little vagaries, but it must be aggravating to buy *Bronze Queen* and when it flowers find it to be *Clio*, or to get Mrs. Clark and wonder next spring where all the Mrs. Moon came from. My practical advice to purchasers when ordering "new names"—that is, names which they have not come across before—is to be wary—very wary. Many are all right, but some are not.

Too-Much-Alike Varieties.—I really do not know into how many hundreds Darwins might not run if a complete list were to be made. In some the differences are so trifling that for practical garden purposes they are the same. I have, for example, this year, *Night*, *Faust* and *Ravenswing*, three exceptionally fine tall, dark varieties, but any one is virtually a replica of the other two, and the three are not wanted. *Edmée*, *Baron de la Tonnaye* and *Calliope*, as it was sent to me, are three more of which one might well say, when we see them blooming together, "How happy could I be with

any one, were the other fair charmers away." Moral: Now that Tulips are becoming more sought after, has not the time come for the Royal Horticultural Society to bracket too-much-alike varieties? Such a list would be very handy.

Some "Quite Nice" Tulips.—In taking notes one cannot help overhearing many remarks of bystanders. Their adjectival ejections are as finely graded as the explanatory word or words before "eggs" in a shop window. "Quite nice." I have come to the conclusion, is a grown-up and polite way of saying "jolly good." So here goes



THE CENTURY PLANT (*AGAVE ATROVIRENS*) ABOUT TO FLOWER AT KEW. VISITORS TO THE GARDENS DURING THE INTERNATIONAL EXHIBITION SHOULD MAKE A POINT OF SEEING IT.

biennial. The flowers, which are of a most beautiful orange scarlet colour, are borne in tiers on erect, slender stems about a foot in length. It makes a pretty and decorative plant when grown in a cool greenhouse, and, being quite hardy, does equally well in the open ground.

P. glutinosa is a bog plant, easy to grow, but almost impossible to flower here. I have grown it in quantity for years, and have rarely seen it in flower. I have compared notes with other growers, and find their experience similar to my own. This is a beautiful Primula and flowers freely in the Alps, where it is found.

for some "jolly good" Tulips which I have grown this year.

Short Darwins—that is, those which grow about twenty-two inches high. *Bleu Amiable* is a blue-purple of an elegant open Grecian vase shape with a very lovely interior, as the blue base is surrounded by a wide zone of rich purple, which gradually fades into lighter shades towards the top. Harry Veitch has appealed to a great many this year on account of its dark rich crimson coloring; it is a large flower, and as good for pots as for the open. William Pitt, my colour-chart tells me, is a deep shade of blood red with a brighter edging to the petals. I had never realised till this year what a remarkably good thing it is. *Suzon*, although a trifle taller than those mentioned, is a good-sized flower of a delightful shade of warm, pale pink, with a deep, almost salmony rose interior. It happens to be next to *Prince Maurity*, which is a plant about the same height and of a pleasing rich claret tone. The contrast is admirable.

Taller Darwins.—Mr. Farncombe Sanders reigns supreme in its own colour. I call it a vivid pinky rose, but other eyes see it a "vivid red" or a "dark crimson"; when the latter describer saw it he must have had blue spectacles on. "Fiery rose scarlet" is much better—possibly, even a better description than my own. *Viola* would assuredly be noted by all who love the dark claret shades. It has a big, well-shaped flower, something like *Giant*; but whereas there is a dulness in a bed of this latter, there is nothing of the kind in *Viola*. For those who prefer a blue-purple darkness, give me *Morans*. Kirke's plum with bloom on that will not wash off is how I always describe it to myself. It has a little of *Zulu* about it, but it does not look quite so much as if it was walking on stilts. *Rose Beauty*, which, strictly speaking, is a *Cottage*, happens to be alongside it. I am generally congratulated by visitors on my colour perception in placing the two together. As a matter of fact, it is pure hick that the two are growing where they are, but, nevertheless, the result is a very happy and striking one. *Rose Beauty* is a Darwin in all but name, of a real bright, clean rose, somewhat after *Cassandra* and some of the choicest of Mr. A. D. Hall's pure-based seedlings, of which I happen to be the fortunate possessor. *Mauve Clair* belongs to the mauve and lavender group, of which *Erguste* and Rev. H. Ewbank are well-known examples. But it is much taller and larger, and has a very distinct pale lavender edge to its petals. Just at first it is not as attractive as it might be; but give it time, and then you get a beautiful flower. *Michelin*, to which I am indebted

to my friend, Mr. Leak, for an introduction, has a large fine bloom of a pleasing shade of old rose, with a paler shade at the edge of the petals. It makes a very bright spot of refined colouring, and it is one of my new ones, of which I hope to get more this autumn. But I am running on regardless of the Editor and my paper. So many varieties are competing for the honour of being the tall stop that I have, metaphorically speaking, put them all in a bag, and out has come *Prince of the Netherlands*. Yes! it is well named. It looks a *Prince* among its compeers, *Edmée*, *Mrs. Krelage*, *La Fiancée*, *Baron de la Tomnaye* and the whole company of edged roses and pinks. It is tall and majestic, and there is a warm, soft tone in its rosy pink that, I cannot, at the moment,

THE ROYAL HOSPITAL, CHELSEA.

ITS HISTORY AND TRADITIONS.

THE soldiers' hospital at Chelsea, in the grounds of which the Royal International Horticultural Exhibition is being held, is one of the most precious of our public buildings. Although it is not so great and splendid as the sailors' hospital at Greenwich, yet it is a most perfect and singularly little-altered example of a civil building designed by Sir Christopher Wren, and executed without modification or delay under his direct supervision. The story of its origin, its founding, its erection and its organisation

is among the most interesting pages of our domestic history. As early as the reign of Elizabeth, the principle that the State should look after disabled soldiers was recognised, but very little was done practically in the matter until after the Restoration in 1660. The following year Sir Stephen Fox became Paymaster of the Forces and actively urged the cause of the maimed members of the Army. It was not, however, till long after he had ceased to be Paymaster that he succeeded in getting his scheme adopted. This scheme took the form of obtaining land and erecting buildings for the housing of Army pensioners.

The first question was the site, and it was considered that Chelsea, then a country village conveniently near London, would be in every way suitable. Charles II., on regaining the throne, had found an abandoned college and twenty-seven acres there in possession of the Crown, and had given them to the newly-formed Royal Society, of which John Evelyn and Sir Christopher Wren were original and active members. The Society found no use for the land and were ready to part with it at a reasonable price. We therefore find in Evelyn's Diary, under the year 1687, the following

entry: "Sept 14th, Din'd with Sr Stephen Fox, who proposed to me ye purchasing of Chelsey Colledge, which his Ma^y had some time since given to our Society, and would now purchase it againe to build an hospital or infirmary for souldiers there, in which he desired my assistance as one of the Council of the R. Society." The transaction took place, and additional contiguous land was soon afterwards added, mostly purchased from Lord Cheney, who was the principal Chelsea landowner, and whose name has been retained in more than one of Chelsea's thoroughfares. Two months after the meeting of Evelyn and Sir Stephen Fox, Letters Patent were issued under the Great Seal, declaring the Royal intention of creating a hospital for the relief of such land



VIEW IN THE HALL AT CHELSEA HOSPITAL.

associate with anything close. Everyone puts it down; but, alas! it is still a little expensive for ordinary mortals to order by the hundred. Some day soon, as it is a grand doer, everyone will have it in their garden. JOSEPH JACOB.

HABERLEA RHODOPENSIS.

Grows on the shady side of a rock garden, packed between stones in a vertical position, such as the *Ramendias* require, this interesting *Gesnerad* will render a good account of itself. It is a native of Eastern Europe, and in the near vicinity of the Shipka Pass in the Balkans, it grows freely and flowers in wonderful profusion throughout June. It is naturally a cool and shady loving plant.

soldiers as were or might be lame or infirm in the service of the Crown, and endow it with a suitable revenue. In the following February the first stone was laid by the King. Previously to that, Sir Stephen, who is described by Evelyn as having "the whole management of this," had asked the diarist "to assist him, and consult what method to cast it in, as to the Government." They worked together in Sir Stephen's study, and framed a scheme of the necessary officials and household, their duties and emoluments, and also regulations for the conduct of the institution, "which was to be in every respect as strict as in any religious convent."

Sir Christopher Wren had accepted the post of architect, and had produced the plans. In May he went in company with Sir Stephen and Evelyn with his "plot and design" to Lambeth to obtain the Archbishop's approbation of them. Until the land was needed it was let out as a farm to Thomas Franklyn, to whom thirty pounds was paid "in full satisfaction for damage by him sustained in his crop of turnips, in that part of his ground that was laid to the hospital in the years 1682 and 1683." Such is the story of the beginnings of the hospital as history paints it.

Soon after the building began, the Earl of Ranelagh became Paymaster, and his name is connected not only with the building and completion of the hospital, but with the history of that part of Chelsea. He was much in favour with William III., who granted him, in accordance with the rash and improper mode in which that

Sovereign squandered the Royal domains until Parliament restrained him, the whole of the eastern portion of the land that had been acquired for the hospital. On this land the Earl built a residence, and it would appear that he employed on its erection and decoration some of the same craftsmen he had under him at the hospital. They were men much employed by Wren. Maurice Emmett was the chief bricklayer here, as he was at Whitehall and at Hampton Court. Thomas Wise and Thomas Hill are master-masons at Chelsea as they are at St. Paul's Cathedral. At both these buildings we also find Charles Hopson, Roger Davis and John Smallwell as master-joiners.

The external materials of the hospital are a purple-brown brick for the walling and a rubbed red brick for the window openings. The coigns and the pedimented centres of the chief elevations are of stone, while the thick green slates of the hipped roof rest on an ample cornice. Internally it is the fine treatment of the woodwork that arrests attention. The staircases are very plain,

but are splendid in their amplitude and the easy swing of the ascent. This is greatly to the convenience of the aged and infirmed pensioners lodged in sixteen great wards or galleries, each occupying on different floors half the length of one of the sides of the building, which forms three courts. Oak is the wood universally used, and there can be no doubt that the whole of the joinery was designed by Wren himself. It is simple and reserved, and very practically adapted to serve the purpose in view. But it is all so good in line and proportion as to be most effective and satisfying in appearance. A row of windows occupies one side of these galleries, and on the opposite side, broken only by a great central fireplace, is a set of cubicles. They are partitioned off in Oak wrought in the large dignified panels and the rich and ample cornice mouldings of the period. Each one has, next to its little doorway, a big hinged panel which enables the pensioner

and reading room. The decorative scheme is dignified but simple. High wainscoting of Oak lines the walls. Above this, across the entrance end, runs an Oak gallery supported on carved consoles and with enriched mouldings to its panels. In the centre is a carved cartouche containing the Royal arms and surrounded with Palm branches. The west, or high table end, is principally occupied by a great fresco painted by Verrio, which, according to the inscription upon it, was given by Lord Ranelagh, although in the hospital accounts there appears the item £210 15s. paid to the artist "on account of painting in ye hall." The subject is Charles II. in the same classic dress which he wears in his statue by Grinling Gibbons in the centre of the court, while behind him is seen a presentment of the hospital buildings. The painted area is carried on for some distance along the side walls, where it represents trophies of arms, and the whole is bordered by a representation of a carved and gilt frame. Below it the wainscoting has a moulding beautifully wrought with wreathed Oak leaves intermixed with flowers. That is the utmost elaboration that the woodwork of the hall reaches; but in the chapel we find carving of great richness and excellence.

What was then called the "council chamber" is now known as the Governor's State Drawing Room. It is a large and beautifully-fitted apartment occupying the south-eastern corner of the centre court on the ground floor. James II., during whose reign the



CHELSEA HOSPITAL FROM THE EXHIBITION GROUNDS.

to enjoy privacy if it is closed, or to look out on the life and general activity of the ward if he opens it. Here is the account of one of the joiners for his share of the work in these wards and in adjacent premises:

"Charles Hopson, joyner, his taske worke wainscoting the second & third galleries in the west wing, viz, xiiijth, and for pieces of wainscoting in the great staircase and kitchen pavillion, the great staircase by the pavillion next the Thames, in the west wing, and in the hall, vs, lxijth xijs iijd ob."

Most of this, though fine, is plain joiner's work only; but more ornamental treatment begins with the hall which Hobson wainscoted. In the middle of the north elevation of the centre court and enclosed under a lofty portico lies a great square vestibule, and right and left of it open out the chapel and the hall, each of which is 108 feet long and 37 feet wide. The pensioners now mess in their wards, and the hall is their play

Council Chamber, where his initials, as well as so many other parts of the hospital, were fitted, appears to have taken a very direct and personal interest in the work and urged it on in order that it might be occupied by the intended pensioners. He, therefore, gave many verbal orders to Lord Ranelagh, who had to explain the position fully in a minute to the Lords of the Treasury when he presented his accounts in the following reign. He would not, however, find any difficulty in obtaining payment, for he was much favoured by William III. After his death his house and gardens passed into hands that laid them out for public use, and they became the famous Ranelagh Gardens of the eighteenth century. William III.'s foolish and imprudent gift has needed, in more recent days, the outlay of a large sum in order that the hospital might regain the portion of the ground that it had lost. By a happy chance it has come down to our days almost free from what the flux of fashion labels and re-labels "improvements."

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REVIEW OF THE ROYAL INTERNATIONAL SHOW.

IN sunny weather the long-looked-for Royal International Horticultural Exhibition was opened by Their Majesties the King and Queen at twelve noon on Wednesday last. It is safe to say that the ancient craft of gardening has never before attracted so large and brilliant an assembly. Not only were Ambassadors representing all the important nations there, but statesmen, men of letters, and every form of distinction were present. Their Majesties were received by His Grace the Duke of Portland, who is president of the exhibition, and, after shaking hands with the Ambassadors and some of the directors of the exhibition, made an extensive tour of the tents and grounds and expressed themselves as being very pleased with all they saw.

Taken as a whole, the exhibition is quite up to expectations. Such a display of rare and lovely flowers, rock gardens and plants has never been witnessed in this country before, if, indeed, anywhere in the world.

The large tent alone is a sight not easily to be forgotten. Roses, Rhododendrons, magnificent banks of Ferns, fruit trees, greenhouse and stove plants of various kinds, as well as new Chinese plants, are represented on a luxurious scale. The Orchid Tent, too, is a feast of colour, and it would be difficult for anyone to estimate the value of the thousands of beautiful plants that are staged in it. Fruits and vegetables, though not shown on a very extensive scale, are exceptionally good, and it will be a source of gratification to all connected with the show, or indeed gardening of any description, to know that His Majesty the King has secured two first prizes for fruit.

The rock and other gardens are an exhibition in themselves; for design and workmanship, as well as good taste, the majority are excellent, and it is an educational feature that we think these will be most appreciated.

The characteristic that strikes us more forcibly than any other at the moment of going to press is the high quality of all the plants, flowers, fruits and vegetables that go to make up this wonderful show. It is a marvellous tribute to the skill of gardeners in this and other countries, and will, we hope, be the means of drawing attention to a class of men who in the past have not had their due share of recognition from the general public.

In the pages that follow will be found a review of the best exhibits in the show. Owing to the fact that this issue had to go to press immediately after the opening of the show, it is not possible to give the names of prize-winners, except in a few instances, but these are all being published

in a handy book by the directors of the exhibition. Next week we hope to give descriptions of the new plants that have gained awards, as well as a review of the horticultural sundries.

THE ROCK GARDEN.

To say that there are rock gardens by the acre, that there are hundreds of tons of rock representative of many diverse types geologically from various parts of the country, associated with hundreds of thousands of alpine and other hardy plants gathered together, would

all our readers as something to see, and certainly worthy of study and emulation. Hitherto Messrs. Wallace have given proof of their masterly grasp and finished work in this field, but never before have they attempted anything on such a magnificent scale as this or accomplished a work that has placed a crown on the head of all previous efforts. It comprises some eight thousand square feet of a rather crudely shaped valley between trees. And out of this have been fashioned rock and water gardens, an Old English terrace garden, brightly furnished borders, wood hut and Lily plantations, with waterfall and the like. The conception of the idea is as great as the work is finished and complete and natural—as natural, indeed, as the



THEIR MAJESTIES THE KING AND QUEEN INSPECTING THE FLOWERS AT THE EXHIBITION.

convey to our readers but the vaguest idea of the magnitude of a work which for weeks past has engaged the attention of all who garden chiefly in the open air.

In some instances, notably that of Messrs. Wallace and Co., Colchester, a great work has been achieved, the magnitude of which can only be gauged by the time the work has been in hand and the numbers engaged. For a month or more some twenty or thirty men have been busy excavating, moulding, shaping and building up this splendidly-conceived rock and water and terrace garden, with the result that we have presented to us such work in the exhibition field in a perfect manner and on a really magnificent scale. In the open it is one of the greatest features of the whole exhibition, one to which we would direct

combining of so much in such an area renders possible. It is, indeed, a praiseworthy and successful attempt of adapting the work to circumstances and surroundings, and no effort has been spared to accomplish the end in view. At the entrance the visitor is first led by way of an easy grassy slope to the water's edge, and anon by rather spacious, well-conceived pathways to other parts. Presently, by way of steps, the terrace garden is reached, and from this the border and the woodland beyond. The work of excavating and forming the whole has involved the moving of a great mass of earth, height and depth and varying aspects having been gained thereby. The rock chiefly used is Purbeck limestone of oolitic character, beautifully stratified and in every way eminently suited to the work.

The mass and variety of plants employed is enormous, and it is quite impossible to enter into details concerning them. Everywhere are groups and colonies of plants deftly planted and set out with discretion and skill—now a mass of *Primula*, *Trollius*, or *Epimedium* near the water's edge; fine groups of *Orchis foliosa* or *Yuccas*; delightful batches of hardy Ferns adorning the sides of the cave and, not less beautiful, the Iris border, where many delightful varieties are to be seen in bloom. This fine piece of work is non-competitive, and without hesitation we pronounce it the noblest or its kind that has ever appeared at an exhibition.

by our readers, and will not be missed, indeed, by any lover of alpine plants. *Iris cristata*, exceptionally well grown, is also charming in this group, and so, too, are *Oxalis enneaphylla* and *Ramondias*.

Messrs. Whitelegg and Page, Chislehurst, have arranged a pretty rockery bank with water pool, and associated therewith a number of suitable plants. *Cheiranthus Allionii* and *Saxifraga aizoon rosea* are of much merit, while of border plants nothing stands out so prominently or well as the new *Geum Mrs. J. Bradshaw*. Very good, too, are the alpine *Columbines* in the group, which cannot well escape notice.

below. The sides and banks are for the most part deftly planted—possibly a little over-planted and over-coloured here and there—while the crevice planting is certainly good and usefully suggestive to those contemplating similar work. The variety of plants employed is very great, some of the finer being *P. hulleyana*, *P. cockburniana*, *Cobweb Houseleeks*, *Fabiana imbricata*, *Edelweiss* and *Saxifraga Cotyledon*. A superb colony of *Cypripedium spectabile* is not likely to escape the notice of anyone interested in hardy flowers.

In near proximity is an effective rockwork arrangement from the Guildford Hardy Plant Nursery, and here the visitor will quickly get into touch with so good a plant as *Polygonum sphaerostachyum hybridum*, with its rosy-coloured spires; with *Celmisia spectabilis*, or the delightful miniature shrub *Enonymus microphylla argentea*. *Anthyllis montana*, the semi-shrubby *Lithospermum graminifolium* and *intermedium*, *Primulas bulleyana* and *Unique* and the rare *Swertia perennis* are all things to be looked for in this excellent group.

In due course the Rambler amid rock garden scenes will come upon a splendid arrangement by Mr. Maurice Prichard, Christchurch, Hants, who, while embracing an area of some three thousand or more feet, has achieved a splendid success with a rock and water garden and moraine, the latter of which alone is capable of fixing the lover of alpine vegetation for an hour or more. It is most likely to be in the latter range, should the visitor get into touch with the owner, for Mr. Prichard is nothing if not enthusiastic, singularly genial, and ever willing to impart information about the plants he loves so well. And the hosts of them, their beauty and variety and the consummate skill in placing and arranging them, goes far to tell of the enthusiasm of the man and his knowledge of the work. Among the gems in the group, the visitor must not overlook *Helichrysum frigidum*, *Omphalodes Luciliae*, *Oxytropis uralensis*, *Silene Hookeri*, *Sedum pilosum*, *Arenaria verna fl.-pl.*, *Thalictrum pubescens*, *Edraianthus pumillorum* and *Oenothera ovata*. *Saxifragas* are there, too, in plenty, the lovely *Dr. Ramsay* an aristocrat among them. The arrangement is that of rock and water garden combined, and is non-competitive. The rock is the Purbeck oolitic limestone, selected with care and arranged with skill. Bold masses of *Funkias*, *Iris*s and *Trollius* occupy congenial spots, and, generally, those hungering and thirsting after knowledge will find much that is useful and suggestive in this excellent piece of work.

Messrs. William Cutbush and Son, Highgate, N., occupy a position not far away, and, covering an area of about three thousand feet, have got together a rock and water garden of delightful aspect, richly endowed and furnished with suitable plant-life. This group is singularly rich in bulbous plants, and *Lilies* more particularly, and of these alone in their great variety and beauty Messrs. Cutbush have provided a great feast to which every reader of these lines is cordially invited. Such species as *Grayii*, *Brownii*, *Humboldtii* magnificent, the lovely golden-flowered *Parryii*, *Kelloggii*, *Martagon album* and the stately *giganteum* are all there, not in feeble array, but in great representative abundance. A great colony of *Cypripedium spectabile* is a feature; the unique *Ostrowskia magnifica* is there, too; and so, also, are the rare *Meconopsis sinuata* and the pale yellow *M. integrifolia*. *Armeria laucheanae* contributes a fine bit of colour, while shrub, alpine and aquatic in variety



MESSRS. R. WALLACE AND CO.'S ROCK AND WATER GARDEN.
THIS WON THE CUP OFFERED BY QUEEN ALEXANDRA FOR THE BEST ROCK GARDEN.

In another direction Messrs. Backhouse and Son, York, have a particularly good piece of rockwork, one of 600 feet in the competitive section and another of some three thousand feet or four thousand feet non-competitive, the latter combining water as well. In this also there is seen some excellent work, the whole being richly clothed and furnished with rare and good plants. Here the visitor may find great colonies of delightfully-grown *Ramondias*, *Pinguicula grandiflora*, *Anemone sulphurea*, *Oxalis enneaphylla*, *Viola pedata*, *Primula sikkimensis*, *P. cockburniana* and *P. japonica*, *Celmisias*, *Saxifraga longifolia*, *Orchis foliosa* (a superb lot), *Viola gracilis* and the rarely-seen *Ranunculus Lyallii*, with its handsome flowers of glistening white above a setting of glossy peltate leaves. This is perhaps one of the rarest plants in the exhibition, one to look for and admire.

Messrs. Jackman and Son, Woking, have a rockwork display of a non-competing kind extending to about one thousand feet, handsomely and freely furnished with many choice things. The splendid specimen examples of the ever rare and beautiful *Acantholimon venustum* are a great treat, magnificent tufts the like of which we have not seen before. This is a subject not to be missed

Mr. J. Wood, Boston Spa, Yorks, has a fine exhibit in the competitive section, the well-weathered York limestone in good stratified examples attracting attention at once. Among interesting and good plants to be looked for are *Iris Lacustris*, *I. cristata*, *Cathcartia villosa* (rich golden Poppy-like flowers with hairy leafage), *Trilliums*, *Saxifraga paradoxa*, *Aquilegia glandulosa*, *Edraianthi* and many others. *Primula sikkimensis* and *Cypripediums* are also above the average. This group is fronted by a serpentine streamlet, and is nicely arranged.

Near by, Messrs. Barr and Sons, Covent Garden, have a similarly-sized rock garden group and rock wall, the rock of the former being also of York limestone. There is a remarkable variety of plants here, and the casual observer will not be likely to miss the Ferns, *Cypripediums* and *Saxifragas*, any more than the specialist will overlook the fine examples of *Onosma Bungei*, *Anemone sulphurea*, *Primula cockburniana*, *Sarracenas*, *Iris*s, or other good plants.

Messrs. Piper, Bayswater, have a most distinctive rock garden exhibit in the 600-foot competitive section, the chief feature of which is a huge cave with water overtopping in a pool and streamlet

give their quota of interest and value to a very excellent whole.

Messrs. J. Carter and Co. have a large and comprehensive Japanese garden. On entering the garden we pass under a thatched archway, flanked by two beautiful old bronze Japanese lanterns. This entrance alone is a feature of great interest, but it is simply a part of the whole scheme and merges into the picture. Passing on, towering above the grouped flowers is a very fine old stone lantern, aged 450 years, one of those quaint and exceedingly beautiful examples of the art of the Far East. Near by is another beautiful ornament in bronze. This represents the sacred Hoho bird of Japan, with its seven tails. To the right is a Japanese well, with the pulley beneath a quaint thatched roof, and close by is a very fine Japanese monument, over five hundred years old. At the far end the lake is spanned by a light and graceful Japanese bridge with a house in the centre. But the *pièce de résistance* is a very fine bronze eagle on a rugged stump, standing about eight feet high, specially procured from Japan at a considerable cost. The whole garden is furnished with very old and quaint stone lanterns, and as the exhibition is open until ten o'clock at night, the scheme of illumination is of plain green Japanese lanterns, which give a very charming effect.

Mr. H. Hemsley, Crawley, who entered the 600-foot rock garden competition, has a very pleasing group in rock composed of Sussex sandstone, planting it freely and well with alpiners and shrubs. *Sutherlandia frutescens*, *Onosma taurica*, *Shortias*, *Pentstemon glabra rosea*, *Cathcartia villosa*, *Edelweiss*, *Saxifrage*, with *Onosma stellulata*, are among important plants to be searched for in this interesting group. Adjoining there is a tiled garden of formal outline that is bound to catch the eye.

Baker's, Wolverhampton, have a rock and water garden arranged on a superficial area of 2,000 feet, planted in a most effective and attractive way. Quite a variety of useful plants are employed, though we would especially direct the attention of our readers to such individual subjects as *Cathcartia villosa*, *Achillea Kellereri*, *Oxalis enneaphylla*, *Campanula Allionii*, *Asperula suberosa*, *Dianthus subacaulis* and *D. arvensis*. The water garden portion is particularly well done, and, associated with moisture-loving *Primulas* and other suitable plants, constitutes a most agreeable whole.

Messrs. Ware, Limited, Feltham, have arranged a spacious rock and water garden on an elaborate scale, some six thousand feet being covered by this exhibit alone. Wall, rock and water gardening all enter into a scheme which is admirably conceived and well carried out. We can only regret that space will not permit us to enter into descriptive details.

Messrs. J. Cheal and Sons, Crawley, have an admirably-conceived pergola, rock and water and terrace garden all in one, or, rather, a continuance the one of the other. In conjunction with this the old Tudor garden and Lily pond are in delightful harmony, the rock garden, executed in Sussex sandstone, being among the things to search for and admire. The whole scheme is carried through on a most elaborate principle, the rock garden and pergola work being well worthy of a visit and close study.

Mr. H. C. Pulham, Elsenham, Essex, has a most elaborately-designed rock and water garden, covering a superficial area of some four thousand five hundred feet. Red Norfolk sandstone, at once good in colour and sympathetic to plant-life,

is that employed, and with a series of cascades and waterfalls a most effective whole is the result. In this way there is a difference of 15 feet or 20 feet between the upper and lower levels, shrub and plant of taller growth occurring in the former, with alpine, aquatic Fern-life and the dwarfest of vegetation occurring low down or at the water's edge. Many tons of stone appear in this exhibit alone.

Mr. Amos Perry, Enfield, has arranged between tents many good hardy plants, aquatics and Ferns in groups.

Mr. G. Reuthe, Keston, has a most interesting lot of things; and there are a score of others who have set up alpine and rock or allied exhibits with taste, forethought and skill, to which we have no space to refer in detail.

ROSES.

One has become so accustomed to viewing superb displays of our national flower at the Temple Show that no one could be surprised to find growers surpassing all previous efforts. Instead of the restricted space which made the grouping at the Temple somewhat cramped, there is here plenty

Although these notes are written before the awards are made, we should say the jury will have great difficulty in passing over the superb group of Messrs. Paul and Son of Cheshunt, a group worthy of the great firm that has so often carried off the gold medal, and which may be fortunate enough to secure the coveted cup of the Worshipful Company of Gardeners on this occasion. Weeping standards are here in all their beauty, from the gorgeous *Excelsa* to the dainty *Lady Godiva*. These Roses are worked upon a special stock, which, at least for pot culture, have the great merit of lightness of stem and elegance throughout. Among the splendid and well-flowered weepers we noticed one consisting of a quartet of beautiful sorts, namely, *Excelsa*, *Lady Godiva*, *Dorothy Perkins* and its white sport—a happy blending of colour and of kinds that bloom simultaneously.

We cannot in our limited space give the names of the great variety to be seen in this group, but will content ourselves with naming a few. Perhaps the best novelty is one of Messrs. Paul and Son's own raising, named *Freda*. It is a really superb Rose, "a pink *Bessie Brown*," as Mr. Paul termed it; but really we think this does not do it justice, because it appears to us to be of even more



SOME OF THE JAPANESE LANTERNS AND STORKS IN MESSRS. J. CARTER AND CO.'S JAPANESE GARDEN.

of scope that has given the floral artist all that he could desire. One's mind goes back to the shows of years ago, when there were no ramblers and no *Polyanthas*, and the groups then, although composed of a few huge specimens, were so totally different from those on view now as to really startle one by the great advance made in the culture of Roses in pots, and the large place taken by ramblers and *Polyanthas* as decorative plants. Not only do we find them in the large groups composed entirely of Roses, but they are also employed in groups of miscellaneous subjects, as well as to decorate the pavilions about the grounds.

elongated form than that well-known variety. A superbly-coloured *Juliet* is growing in standard form, and portrays the suitability of this unique Rose as a standard. *Nelly Johnstone*, *Mrs. A. R. Waddell*, *Arthur R. Goodwin*, *Lady Pirrie*, *Marquise de Sinety*, and *Queen of Spain* are magnificent, and the lovely little white *Polyantha Jeanne d'Arc*, the deep pink *Maman Levavasseur*, the brilliant *Jessie* and others complete the *tout ensemble* of this choice display.

Messrs. W. Paul and Son of Waltham Cross have also a noble group, the individual specimen ramblers being grand both in colour of blossom and quantity,

and they have been timed to a day. Paradise is really very fine, the quaint blossoms showing up like so many gorgeous stars. Elsie is a lovely flesh shaded sort, with very beautifully-formed blossoms, and American Pillar is so well flowered that no one can doubt its usefulness in the garden. A mass of the dainty blush pink Edward VII. is here shown, and a most charming Polyantha it is, perhaps one of the loveliest of all; and although sometimes the colours of this class alter when grown outdoors, we are assured this variety is even more beautiful in the open. Among the exhibition and garden varieties, Portia is well to the front, and the beautiful golden yellow of Lady Doune, its flowers borne upon erect stems, shows what a fine bedder it will be. Frances Charteris Seton is a novelty of decided merit and deliciously sweet; its cherry red colour and shapely blossom will commend it to all who love exhibition Roses.

Masses of Polyantha Roses go to the making up very largely of Messrs. Cutbush and Sons' group, and it is very fitting that this firm, who practically introduced Mrs. W. H. Cutbush, should be well

Society's shows, but to-day he is surpassing himself, not so much with the huge show bloom sorts as with grand masses of ramblers, forming perfect pyramids of bloom. The plants are particularly well flowered, and Mr. Mount has made good use of dwarf plants of Crimson Rambler as an edging, showing that this old Rose may be effectively used as a bush plant. A small group of highly-coloured Juliets are a marvel of colouring, and we are pleased to find that Mr. Mount has placed this Rose well away from reds, a colour that should never be placed near this unique variety.

Messrs. Hobbies and Co. of Dereham are making a very big effort towards showing what a Rose garden should be. They have, unfortunately, many plants that will be better in another week, so that visitors next week will see better the beauty of this group than those who visit the show on the opening day.

To the introducer of Crimson Rambler we naturally look for some good novelties, and Mr. Charles Turner has not disappointed us. The fine group from Slough has among its many

of the foregoing groups are to be found in the large tent, and go far to make this wonderful tent the great triumph it undoubtedly is. We should say no more splendid array of Flora's wonders has ever been brought together under one canvas.

In the same huge tent most of the minor classes for Roses are to be found. At one end are groups of pot Roses and cut Roses combined, and here we find some fine quality. Messrs. Frank Cant and Co. are very strong in this section, having really grand flowers of Gustav Grünerwald, Lady Mary Corry, Mrs. H. Stevens (a beautiful white Rose that will become a favourite) and also the marvellously-coloured Marquise de Sinety. We also noted a fine plant of the new Climbing Souvenir de Pierre Notting, which will be very welcome as a wall climber on account of its beautiful Maréchal Niel like blooms.

Messrs. W. and J. Brown of Stamford are displaying some nice bushy plants of Mrs. Flight, which show what may be done with ramblers as dwarf rather than as columnar plants. This group also comprises many choice things in cut form, the whole overshadowed by a large Laburnum growing in the grounds, whose golden panicles droop gracefully over the Roses, supplying a shade of colour that enhances their beauty.

Mr. George Prince of Oxford brings many lovely specimens of the Tea Roses he so well knows how to grow, and Mr. Hugh Dickson of Belfast puts up a group of pot plants of some of his lovely novelties, such as Mrs. C. Allan, Countess of Shaftesbury and the delightful Lady Pirrie, a Rose quite unique in its colouring, and one most adaptable for culture under glass. Mrs. C. Allan is not seen at its best here, for outdoors the colour is of that wonderful hue seen in Mme. Hector Leuilliot, with just a shading of pink. This is a Rose to make a note of, and is perhaps one of Mr. Dickson's best introductions for the garden.

Standard Roses in pots are grandly shown by Mr. Charles Turner, the trees the picture of health. These trees were potted up in the autumn of 1910, grown outdoors last year, the pots being sunk into the ground, and then brought indoors this spring. They were only top-dressed with good loam and Thomson's Manure. Amateurs should see these standards, as it is evidence of what may be done with standards as plants for conservatory decoration.

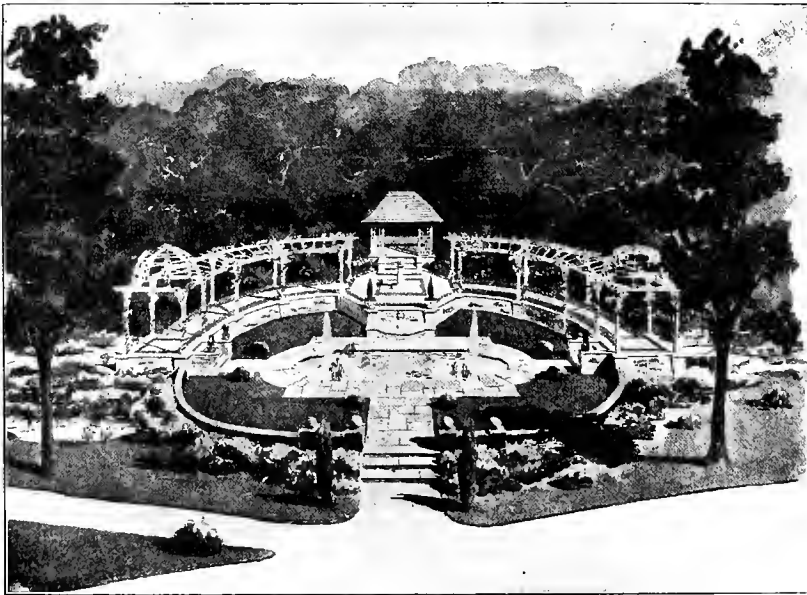
Messrs. Paul and Son have also some very finely-flowered standards.

Two competitors enter for the class for 100 plants of Polyantha Roses, namely, Messrs. Charles Turner and F. Cant and Co. In the first-named group the plants are elegantly arranged, and the sorts are the lovely white Katherina Zeimet, Aennchen Müller, Jessie, Mrs. Cutbush and Mme. N. Levavasseur.

In No. 2 Tent, Messrs. Prior and Son of Colchester have a very lovely group of choice things, and their cut blooms show they have lost none of the art as cultivators.

Messrs. Dicksons of Chester are using ramblers largely in their splendid group of miscellaneous plants in the large tent.

We fear the weather has been too much for amateurs, for up to the time of writing we could find only one group of pot plants. This one, however, is very excellent, and comes from James Brown, Esq., Heaton Mersey. It goes to show what we may expect when the spring show of the National Rose Society is an accomplished fact, a show which we may expect next year, according



THE OLD ENGLISH GARDEN EXHIBITED BY MESSRS. J. CHEAL AND SONS.

represented by these little pet Roses. Quite one of the prettiest Roses in the exhibition is the Baby Tausendschön, a variety, if we mistake not, that will be much sought after. Here it reminds us in colour of a very old Rose, Mme. Pierre Oger, only, of course, very small; but the flowers are prettily cupped and are produced in great profusion. Dwarf standard Polyantas on the rugosa stock are elegantly dotted about in this lovely group, and one cannot but hope they will be more frequently planted in this form, especially as centre-pieces to beds of the same Rose or contrasting colours. The very brilliant Jessie is a variety that will soon largely displace the scarlet Geranium, for last year, when these plants were looking very sad, beds of this little Rose were as brilliant as one could wish. Masses of pillar Roses of such sorts as Mrs. Flight break up the group, and the whole forms a most superb spectacle.

Mr. George Mount is never so happy as when making bold displays. We have had some lovely groups from him this year at the Royal Horticultural

attractions two Roses that we venture to prophesy will be in every garden very shortly. One is named Ethel, a most dainty rambler of the Dorothy Perkins type. It is so light and graceful in its clusters, and it has the merit of flowering some days earlier than Dorothy Perkins, a great gain, as all who love these Roses will admit. The other novelty is named Coronation. Out of doors its colour is much brighter than Excelsa; although so brilliant when grown under glass, the colour of Excelsa outdoors is somewhat dull. Coronation is of the Hiawatha type of growth; its flowers are large, fairly double, but showing a clear white centre with a wealth of golden stamens. This variety, too, is earlier than Hiawatha.

Polyantas and ramblers are splendidly shown by Messrs. S. Low and Co., and one of the loveliest is Eileen Low, a Rose with the airy lightness of Jessie, but of a nice soft pink tint. This beautiful novelty originated with Messrs. N. Levavasseur and Sons of Orleans, a firm to which we are indebted for so many of these pretty Roses. All

STOVE & GREENHOUSE PLANTS.

The most extensive exhibits of these plants are arranged in the huge tent in which are grouped a great variety of different subjects, hardy as well as tender.

Messrs. Sutton and Sons of Reading are, as usual, well to the fore, their exhibit, which is disposed around the well-known obelisk erected to the memory of those who fell in the Battle of Chillianwallah, being arranged in their well-known and most effective style. A notable feature of this exhibit is that the entire collection has been raised from seed. Particularly noticeable among the different subjects contributing to this wealth of blossom are Schizanthuses of different kinds, which have of late years become so popular; various sections of Cinerarias, including the comparatively new Reading Gem, and Calceolarias, of which Sutton's strain is renowned all the world over. *Primula obconica*, too, shows well

the vast improvements that have of late years been effected in this species, not only in the size and shape of the flower, but also in the colour thereof. Gloxinias, which are numerous represented, include among their number the crimson-scarlet King George V. and Her Majesty, with pure white blossoms. From lack of space we can only mention the Begonias, Clarkias, Nemesias, Phlox and Nicotianas of different colours. The edging of fresh, rich green grass serves admirably as a foil to the bright-coloured flowers.

Messrs. James Cypher and Sons, Queen's Road Nursery, Cheltenham, have long been celebrated for their artistic groups of stove and greenhouse flowering plants, and in one of the competitive classes they put up a magnificent group, exceedingly light and elegant in effect. Another exhibit of

Messrs. Cypher's recalls bygone days, as it is made up of magnificent specimens of flowering plants. Some that cannot possibly be passed over are *Clerodendron Balfourii*, *Ixora Pilgrimii*, *Stephanotis floribunda*, *Statice intermedia*, *Polygala dalmaisiana*, *Erica Cavendishii*, *E. depressa*, *E. ventricosa* magnifica, *Azalea grandis*, *A. Model*, *Franciscea (Brunsfelsia) eximea*, *Ixora Williamsii* and *Bougainvillea Cypherii*, remarkable for the rich colour of its bracts compared with those of the better-known *Bougainvillea glabra*.

Messrs. E. Webb and Sons, Wordsley, Stourbridge, are showing many of the same kinds of flowering plants. The most conspicuous are arranged in semi-circular groups, and all and every one show evidence of high culture. Where all are so good it is difficult to single out any particular ones for praise, but the *Calceolarias*, *Schizanthus* and the *Cinerarias* of the *stellata* section are so fine that it is impossible to pass them over. Besides these different subjects, seedling *Hippeastrums* of a very superior strain are shown in quantity.

Near by, Messrs. Veitch are showing about one hundred and fifty of their noted strain of *Hippeastrums*. This strain has long been famous, and has many times gained high honours. The present exhibit is well calculated to maintain the high standard that Messrs. Veitch's *Hippeastrums* have now reached.

A startling exhibit of *Hippeastrums* is that set up by Messrs. R. P. Ker and Sons, Aigburth Nurseries, Liverpool. Ker's *Hippeastrums* are justly famous, not only for the high character of their blossoms, but also for the great variety that exists among them. While all are good, a few stand out in such a manner that their merits can on no account be passed over. Particularly striking are *International* (warm orange netted with red, with a white central band and a metallic violet suffusion in the centre of each segment), *Midnight* (deep blackish velvety crimson), *Salmon King* (rich salmon red), *Ophir* (yellowish buff, the nearest approach to a yellow flower, for which Messrs. Ker have been trying for some years), *Persephone* (flower of perfect shape, white, lined with red in the upper segments), *King George* (soft rose, light stripe at the basal half of each



ROSES SHOWN BY MESSRS. STUART LOW AND CO.

to the remarks which the president let fall at the conference on Monday last.

No visitor to the show should miss the beautiful display of novelties put up in the French Section by M. Pernet-Ducher. It is one of the choicest groups in the whole show, and contains some seedlings not yet in commerce, varieties that will cause quite a sensation. Here we may find the superb Mrs. George Beckwith, a Rose that may even surpass Rayon d'Or. Sunburst is in grand form, and it is shown in two groups, one of its true colour, and another portraying the blooms that come from the hard wood, which are quite pale. It is such a splendid Rose that we can overlook this little fault. Perhaps it may be well to remove the first blooms in the early stage, as then the second crop from the young wood are sure to come the deep golden colour we love so much. Mme. Heriot is likely to be quite a sensational Rose when seen as it will come outdoors. It has the lovely colouring of *Beauté de Lyon*, with the shapely buds of the Hybrid Teas, and the growth is quite erect. President Vignet, *Souvenir de Gustave Prat*, Mme. Charles Lutand, *Lyon Rose*, *Lieutenant Chaure*, *Viscountess Enfield*, *Rayon d'Or* and *Arthur R. Goodwin* provide a sumptuous feast of colour such as no raiser has ever given hitherto.

In the same tent Messrs. Turbat and Gouchault are showing some grand *Polyanthas* that have quite large flowers, one, a white *Yvonne Rahier*, being a real gem.

Messrs. A. Dickson and Sons of Newtownards are showing some choice novelties; but at the time of writing we are unable to locate them. No one should go away from the show without seeing them, for we have found this group one of immense interest.



A MAGNIFICENT COLLECTION OF ROSES SHOWN BY MR. G. MOUNT, AND AWARDED SIR JEREMIAH COLMAN'S CUP

segment), Magnificent (rich crimson, lighter towards the edge, the crimson being there disposed in a freckled manner) and Pink Pearl (rich cherry pink).

Some two hundred seedling Hippeastrums are also shown by Messrs. William Bull and Sons of Chelsea, who for some years have devoted a good deal of attention to this showy class of plants. The varieties are good and well varied, while the condition of the plants leaves nothing to be desired. Particular note may be made of Brilliant (rich scarlet self), Enchantress (delicate blush), King George V. (glowing scarlet), Doris (delicate pink), Sybil (salmon), Primrose Dame (light primrose) and Loveliness (delicate blush rose).

Messrs. James Veitch and Sons, Limited, King's Road, Chelsea, are freely represented in the large tent.

One group, consisting mainly of fine foliage stove plants, occupies a prominent position, and deservedly so, as it is made up of grand plants, beautifully arranged. Each individual plant will bear inspection from whatever standpoint it is viewed, and all are so disposed that the full extent of their beauty can be readily seen. Although no two persons see eye to eye in such matters, yet the most indifferent cannot fail to be struck with the high cultural skill shown in the huge specimens of Caladiums, Crotons, Anthuriums, Alocasias, Dieffenbachias, Dracænas, Marantas and others. This is but a tithe of the different subjects composing this remarkable group. A new *Dracæna* shown by Messrs. Veitch is *D. deremensis Bausei*, in which the white variegation is much clearer than in the variety *Warneckii*, which was given an award of merit last summer at Olympia.

Messrs. Stuart Low and Co. are showing a great variety of flowering and general decorative plants in the large tent. The Bottle Brush Flower (*Metrosideros floribunda*), or, as botanists now call it, *Callistemon salignus*, shows up brightly where associated with foliage subjects. Whether the plants are grown as bushes or standards, the brilliantly-coloured masses of flower are very telling, and are much admired. The variety *alba*, with white or creamy white flowers, is much less effective than the typical kind. Of flowering subjects shown by Messrs. Low

are the pretty, graceful *Aotus gracillima* (with yellow Pea-shaped blossoms), *Fabiana imbricata* (that Heath-like member of the Potato family), *Hydrangeas*, *Heaths* of different kinds, *Carpenteria californica* (which is rarely seen flowering so freely in small pots), *Boronia polygalifolia*, *B. heterophylla*, *Correa cardinalis*, *Asclepias curassavica* and a fine group of the pretty little salmon-tinted *Azalea balsaminæflora*. As an edging plant is employed the Canary Island *Lotus peliorhynchus*, with its hoary leaves and scarlet bird's-beak-like flowers.

From Aldenham House Gardens come a delightful lot of *Pelargoniums*, in which occur many old-time favourites, especially among the scented-leaved kinds. They are all either original species or hybrids

therefrom, and from their uncommon appearance they appeal to many. Altogether about eighty sorts are shown, all being good, bushy specimens in pots 7 inches or 8 inches in diameter.

The huge specimens of scented-leaved *Pelargoniums*, which are trained in various ways, principally in screen shape, from Gunnersbury House (Mr. Leopold de Rothschild) form a notable and uncommon feature.

From Messrs. Fisher, Son and Sibray, Limited, Royal Nurseries, Handsworth, Sheffield, comes a fine group of *Crotons*, several of which have been raised by the firm. Of these last may be specially noted *Duke of Portland* (a medium-sized leaf with a large yellow centre), *Mrs. J. Grace* (which may be described as a yellow *Flambeau*), *Heathii pendula* (a seedling from *Heathii*, in which the foliage is

and *Streptocarpi*, all of their well-known strains, the plants showing evidence of good cultivation.

Messrs. Godfrey and Sons, Exmouth, Devon, exhibit a collection of show and decorative *Pelargoniums*, including all the best varieties in their respective classes. Their exhibit also contains a particularly fine form of *Amarantus tricolor*, whose leaves are as brightly coloured as the showiest blossoms.

In No. 3 Tent, Messrs. Cheal and Son, Limited, Crawley, are showing a collection of Dahlias in pots, an unusual exhibit for this time of the year. The varieties include *Cactus*, *Pompon Cactus*, singles and some members of the pretty *Tom Thumb* class.

The Hon. John Ward, Chilton, Hungerford, has a fine exhibit of *Streptocarpi* in large plants and showing a great variety in colour.

Messrs. James Carter and Co., Raynes Park, have a magnificent exhibit arranged in their well-known style. From a central stretch of turf of the most vivid green spring several beds of single *Petunias*, one of which, *Queen of Roses*, is the finest variety of that colour we have ever seen. Other choice varieties are *Purple Prince*, *Crimson King* and *White Pearl*, whose distinctive features are indicated by their respective names. The rich rose-coloured *Stock Queen Elizabeth*, and *Cineraria Brilliant Prize*, with huge blossoms, which serve to show the great contrast in the size of the blooms of this section compared with the small graceful blooms of the *stellata* class, are also shown. Being enclosed within light lattice-work painted pale green, the harsh lines of the huge tent and its supports are partially hidden by this, and a pleasing effect is produced thereby.

Begonias in No. 2 Tent form a gorgeous display. Messrs. Thomas S. Ware, Limited, Feltham, have a glorious lot of double-flowered varieties, including the magnificent pink form, *Lady Cromer*, of which a coloured plate was given in THE GARDEN for January 20 of the present year. Other varieties with huge, finely-formed and exceedingly beautifully-coloured blossoms are *May Queen* (bright salmon), *George V.* (brilliant orange salmon), *Margaret Guillim* (light yellow), *Mary Pope* (white), *Captain Lafone* (soft pink), *Lady Ebury* (carmine rose), *King Edward VII.* (rich crimson) and *Mrs. Whitelaw* (vivid orange).

Messrs. Blackmore and Langdon, Twerton Hill Nursery, Bath, have a very fine collection made up of magnificent double and single flowers, as well as several varieties of a loose, drooping habit of growth, a character that eminently fits them for growing in suspended baskets. Particularly striking among the double kinds are *Mme. Tetrizzini* (orange salmon), *Irene Lambing* (vivid orange), *Mrs. Peter Blair* (white), *Miss Ethel Gill* (rose, a particularly upright flower), *Princess Victoria Louise* (pale salmon pink), *Mrs. W. L. Ainslie* (rich yellow), and *Violet Langdon* (pale pink, deep rose



A PATHWAY COVERED WITH ROSES IN MESSRS. HOBBIES' GROUP.

far more drooping than in the type), and *Victoria superba* (marked heavily with rich orange). Besides these are such well-known kinds as *Warrenii*, *volutus*, *Reidii* and *Lady Zetland*, which with some choice forms of *Cordyline australis* go to make up a very effective group.

The *Hippeastrums* from Sir George Holford, Westonbirt, Tetbury, make a gorgeous display, the range in colours being considerable. What is more, the Westonbirt *Hippeastrums* have long been famous for their vigour, so that specimens bearing two and three spikes of flower are in the majority.

Messrs. John Peed and Son, Roupell Park Nurseries, Streatham, show *Caladiums*, *Gloxinias*

edge). Two new varieties in this exhibit are Red Cactus and Rose Cactus. In these varieties the flowers are made up of a number of long petals, which give to a bloom very much the appearance of a Cactus Dahlia. These varieties are of a somewhat loose habit of growth, and in addition to their being good decorative plants, they are well adapted for growing in suspended baskets. Messrs. Blackmore and Langdon also make a speciality of flowers whose edges are remarkably fringed.

Messrs. Charles Turner and Sons, Royal Nurseries, Slough, show a varied assortment of greenhouse flowering plants, including specimen Azaleas, which, though well flowered, cannot, however, compare in size with the giants of old. Heliotropes, grown in various ways, and Pelargoniums of different sections also make a good display.

E. D. Preston, Esq., Kelsey Park Gardens, Beckenham, shows a large flowering specimen of *Phoenix Roebelini*.

Lord Northcliffe, Sutton Place, Guildford, exhibits a nicely-arranged group of decorative flowering plants, such as Calceolarias and Cinerarias of different sections.

Messrs. William Artindale and Son show, in Tent No. 2, a bank of finely-flowered examples of *Pæonia Moutan* (Tree Pæony), among the best being *Queen Elizabeth* (deep rose), *Jeanne d'Arc* (pink), and *Mme. de Bugny* (white, with violet centre).

Mr. West Neve, West Court, Bray-on-Thames, also shows a group of these showy Pæonies.

In the large tent Messrs. Robert Veitch and Son of Exeter show two remarkably handsome and most interesting Calceolarias. The first, known as *Calceolaria Veitchii*, is the result of a cross between the weak-growing *Calceolaria alba*, with white blossoms, and an albino seedling of *Golden Glory*. Strange to say, the new-comer is a far more vigorous grower than either of its parents, forming as it does quite a bushy specimen some 4 feet to 5 feet in height, and flowers in great profusion; the colour of the blooms is of a milk white tint. This remarkable Calceolaria has proved to be hardy at Exeter, and comes quite true from seed. The second variety, *The Bronze Age*, is of free bushy growth, and bears in great profusion rich bronzy crimson flowers.

Messrs. H. Cannell and Sons, The Home for Flowers, Swanley, Kent, are staging an extensive group at one end of the huge tent. Against a background of climbing Roses are disposed a great number of choice flowering plants, including Calceolarias, among others being the bright yellow *Calceolaria Clibranii*, *Marguerite Mrs. F. Sander*, *Hydrangea arborescens grandiflora*, choice Pelargoniums, including some members of the curious Cactus race, and a very promising double-flowered member of the Ivy-leaved section called *Vicar of Shirley*. The flowers of this are deep scarlet, with a dark blotch in the centre of each segment. The variety *Salmon Paul Crampel*, which has already become a favourite, is also well shown. The flowering Cannas are well worthy of the reputation Messrs. Cannell have so long enjoyed, and the bank of flowering examples forms quite a mass of colour. A few of the most striking are *D. H. Thorn* (crimson), *C. Haussmann* (amber), *Gladiator* (gold, spotted red), *Prefet Bargeton* (deep amber), *John Farquhar* (salmon pink), *Frau G. Siebert* (yellow, lined crimson), and *J. B. Van der Schoot* (one of the best spotted forms). A notable feature is furnished by quite an extensive group of *Phyllocactus German Empress*, a very pretty pink flower.

Mr. W. H. Page, Tangley Nurseries, Hampton, is showing a remarkably brilliant group of Zonal Pelargoniums, consisting mainly of his three varieties, which have aroused a good deal of attention of late, namely, that rich-coloured variety *His Majesty*, the paler-tinted *Fiscal Reformer* and *Winter Cheer*. Each variety is disposed in a large hemispherical mass, and the blaze of colour is a striking one.

Messrs. Philip Ladds, Swanley Junction, Kent, also exhibit a large group of the finest market varieties, including such comparatively new kinds as *Salmon Paul Crampel*, and the still newer pink-flowered *Ambrosia*.

Leopold Salomons, Esq., is showing, towards the central portion of the large tent, a highly decorative group, the central portion consisting of blue Hydrangeas surrounded by well-grown and varied forms of *Schizanthus*, with an edging of *Maidenhair Fern*, alternated with the pretty purplish blue-flowered *Torenia Fournierii*.

The Rev. A. T. Boscawen, Perranwell, Cornwall, has a small exhibit, but in the opinion of many it

early days the improvement is most striking. Cannas, too, of the large flowering race are also largely shown, while the Cinerarias are innumerable in their variety. In the raising of Cinerarias Messrs. Veitch do not follow any hard-and-fast line, but carry out experiments with different species, and thus obtain varied results. One of their latest is *Pompadour*, with striped florets, but it does not appeal to the general public as markedly as do some of the others. The Cactus race are much admired, while the possibility of a clear yellow Cineraria is suggested by the variety *flavescens*, a cross between *Senecio auriculatissimus* and *C. Feltham Beauty*. The brilliantly-coloured flowers of *Kalanchoë flammea* stand out in a very conspicuous manner, as also do those of the new *Kalanchoë Excelsior*, for which Messrs. Veitch obtained an award of merit two years ago. This list might be indefinitely extended, but one or two items must not be passed over. They are *Clianthus Dampieri*, with its richly-coloured blossoms; *Elæocarpus dentatus*, an Australian shrub with prettily fringed bell-shaped blossoms;



CALCEOLARIAS IN MESSRS. E. WEBB AND SONS' EXHIBIT OF GREENHOUSE FLOWERS.

is one of the most interesting features of the show. It consists of three marked forms of the *Manuka* of Australia and New Zealand *Leptospermum scoparium*, a fairly well-known twiggy bush with small white Myrtle-like flowers. The three varieties shown are *Chapmannii*, of an upright habit of growth with rosy red flowers; *Boscawenii*, a loose-growing plant with flowers larger than those of the type, and in colour white with a red centre, the buds being red. The third is *Leptospermum scoparium Nichollii*, whose flowers are of a rich ruby red, quite a startling colour to those acquainted only with the common kind. Hardy in the favoured parts of the country, these *Leptospermums* would form grand conservatory plants elsewhere.

Messrs. Veitch exhibit in Tent No. 3 a charming collection of representative flowering plants of the different classes for which they have long been famous. *Streptocarpuses*, or Cape Primroses, are shown in blocks or masses of nearly every imaginable colour, and to those who knew them in their

Exacum macranthum, whose rich purple flowers are always admired; and *Gloxinias* in choice variety. Some twenty-five *Fuchsias* present quite a unique spectacle, each plant having several shoots trained to the angle of the roof of a greenhouse, thus showing their value for clothing the rafters of such structures or for similar purposes. The varieties grown in this striking manner are *Clipper*, *Final*, *General Grenfell*, *Lustre*, *Mrs. Marshall*, *Mrs. Todman*, *Olympia* and *The Shah*.

Miss Troyte Bullock, North Coker House, Yeovil, Somerset, has in No. 2 Tent a delightful series of Pelargoniums, mainly scented-leaved forms. Many of them are true species, while others are old hybrids whose early history is in several cases now lost. As this collection is made up of 126 distinct forms, we should say that such a collection must be almost, if not quite, unique.

In No. 3 Tent, Messrs. William Artindale and Son of Sheffield show a large and varied collection of the very best forms of *Primula obconica*, whose blooms vary in colour from white to rich carmine

crimson. The pretty white-flowered *Abutilon Sawitzii* has a very nice effect arranged with these *Primulas*.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, have in the same tent a very striking series of the newer hybrid forms of *Gerbera*.

From the gardens of the Marquis of Salisbury, Hatfield, comes a pleasing group of the pretty little violet-coloured *Saintpaulia ionantha*, over which are arranged a few light Palms and plants of the graceful *Cyperus laxus*.

From Tresco Abbey comes one of the rarities of the show, namely, a flowering example of the Andean *Puya chilensis*. From a mass of thick Aloe-like leaves is pushed up a sturdy 6-foot spike, the upper portion of which consists of a crowded head of curious green flowers with yellow stamens. This *Puya* is perfectly hardy at Tresco.

Mr. Bruce, The Nurseries, Chorlton-cum-Hardy, Manchester, whose name has for a very long time been associated with the culture of the different *Sarracenias*, has an extensive group consisting mainly of these fascinating plants, associated with Palms and Ferns, and some pleasing examples of *Nertera depressa*. The *Sarracenias* are now grown to a much less extent than they formerly were.

An addition to the tuberous *Begonias* previously mentioned is a charming collection staged by an

Vuillermet (rich pink, much serrated), Ronsard (a striking flower, in colour rich pink, light centre, toothed at the edges), La Perle (white serrated), Lillie Moullière (a bright rose flower with a light centre, very pretty) and President Fallières (a huge truss of bright pink flowers).

Another collection, shown by M. Fargelon, contains some particularly good examples of blue-flowered forms.

M. George Arends, Ronsdorf, Bei Barmen, Germany, is showing a striking and varied assortment of *Primula obconica*, of which, by the way, there are many notable examples in the present exhibition.

In the Belgian Section, M. Van Houtte, Ghent, is exhibiting a choice group of Indian *Azaleas*, consisting of some of the finest varieties. Particularly noticeable are Jean Peeters (rich carmine), Roi des Blancs (white), Remembrance of Stephenson Clarke (vivid red), Flambeau (intense ruby red), Apollo (light scarlet), Louise Cuvelier (light striped), Professor Wolters (salmon rose) and Temperance (a very distinct lilac flower).

ORCHIDS.

It is true that we had heard glowing reports concerning the Orchids to be shown, but such reports were quite inadequate and failed to do justice

the *Cattleyas*, *Cymbidiums* and *Phalænopsis*. *Vanda teres gigantea*, *Dendrobium dalhousiana* and *Cœlogyne pandurata* are conspicuous in this meritorious group.

Messrs. Stuart Low and Co.'s group in Class 68, species only, is a comprehensive one, and contains representatives of most species worth growing. Just under one hundred species are to be seen in this collection alone.

By a consensus of opinion the Orchid Tent is one of the features of the exhibition; it is heated throughout by an efficient system of hot-water pipes.

Messrs. Sander and Son's extensive group occupies a run of about one thousand feet of staging, and contains some of the most beautiful Orchids in cultivation. It will be noticed that *Phalænopsis* and *Renanthera*, white and orange scarlet respectively, contrast in a most pleasing manner, while *Cattleya Schröderæ*, *Odontoglossums* and *Dendrobiums* in variety are shown in the height of perfection and in great profusion. In the centre-piece of this group will be observed a bold display of *Miltonia vexillaria Empress Augusta*; it is a conspicuous variety with large, deep pink-coloured flowers. The group is staged in a masterful manner, each plant shown to the greatest advantage against a background of Palms. The handsome yellow *Anguloa Clowesii* and the pure white *Dendrobium Dearii* are both conspicuous in this collection.

Messrs. Mansell and Hatcher are the only competitors in Class 66 for a group not exceeding 500 feet, and this contains a grand lot of *Renanthera imschootiana* and *Cattleya Mossiæ* and *Lælio-Cattleya* hybrids in variety. A new *Odontioda* named *Cleopatra* is worthy of special note, also a spotted *Anguloa*, a probable new species of doubtful origin. Two magnificent plants of *Vanda teres*, each carrying seventeen spikes, reflect the highest praise upon the cultivation.

The group by Mr. Ogilvie, containing *Cattleyas*, *Thunias*, *Odontoglossums* and *Dendrobiums*, and covering a space 500 feet in length, is worthy of the highest praise; and the same may be said of the group by Mr. Harry Dixon of Wandsworth Common, which, by the way, contains a wonderful specimen of the Spider Orchid (*Oncidium phymatochilum*); it has four floriferous spikes carrying in all 320 flowers.

Messrs. Armstrong and Brown in Class 83 have a well-staged group, in which *Cymbidiums* and *Cattleyas* form the leading feature.

The comparatively new race of Orchids known as *Odontiodas* forms the chief feature of a wonderful collection sent by Sir Jeremiah Colman, Bart. One plant of *Odontioda Bradshawia* alone carries over one hundred flowers, and the whole group of them originally came from one seed-pod raised in 1906. We particularly ask our readers to look out for *Odontioda Bradshawia* variety *Vivid*; it is a very beautiful and unusual scarlet variety. The *Gatton Park* variety is also worthy of special note, and it is one that secured a first-class certificate at the Temple Show last year. *Odontiodas Vuylsteckæ* and *Lady Colman* are two of the most valuable in the collection. But other Orchids are to be seen in this group, and among them we observed *Odontoglossum Queen of Gatton*, *O. Rolfæ* and *O. crispum* variety *Mary Colman*, *Oncidium pulchellum* and *O. splendens*, *Miltonia lævis*, *M. vexillaria magnifica* and *M. v. Empress Augusta*, *Lælio-Cattleya G. S. Ball*, *L.-C. Ruby Gem* and *L.-C. Phœbe*, *Lælia purpurata gloriosa* and *L. tenebrosa*, *Cattleya Mendelii* and a host of others, including *C. Fascinator* and *C. Mossiæ* in variety.



THE CENTRE OF LIEUTENANT-COLONEL SIR GEORGE HOLFORD'S GROUP OF ORCHIDS, AWARDED THE KING'S CUP FOR THE BEST EXHIBIT IN THE SHOW.

amateur, namely, F. Davis, Esq., Woolas Hill, Pershore, Worcester. This collection contains some very fine forms.

Yet another group of *Hippeastrums*, besides those previously noted, is contributed by W. B. Kenrick, Esq., Edgbaston, Birmingham. They are magnificently grown and the flowers of large size and good shape, the rich-coloured blossoms being particularly good.

FOREIGN EXHIBITS.

The number of stove and greenhouse plants among the foreign exhibits is decidedly limited; certainly not nearly as many as one might expect to have seen.

Of the French Section, the most striking group of this class is a collection of new and newer varieties of *Hydrangea*, shown by M. Moullière, one of whose older varieties, *Mme. Moullière*, has already attained a considerable amount of popularity in this country. Of the numerous examples, the following are especially noticeable: *Directeur*

to the magnificence and splendour of even the first glimpse of the interior of the Orchid Tent. Here are to be seen Orchids from all parts of the country, and such a display has never been excelled for brilliance and quality. It is worth travelling far to see the magnificent group sent by Sir George Holford. *Cattleyas* in the richest hues of crimson and mauve, and a multiplicity of varieties of *Dendrobiums*, *Cymbidiums* and *Lælio-Cattleyas*, are overhung with arching sprays of golden yellow *Oncidiums* against a background of stately Palms. It is a perfect mass of flowers, remarkable alike for quality and quantity, and reflecting the highest credit upon Mr. Alexander, the able grower.

Visitors must not fail to notice the grand lot of *Vanda teres* shown by Mr. Leopold de Rothschild, Gunnersbury Park Gardens (gardener, Mr. Reynolds).

Mr. Gurney Fowler is showing a creditable group of *Odontoglossums*, *Phalænopsis* and *Cymbidiums*, also very choice varieties of *Odontioda*.

Messrs. Cypher and Son's group, occupying a run of 400 feet, is remarkable for the excellence of

But this is not the only group sent from Gatton Park, for Orchids of botanical interest are likewise shown. The public who are seeking weird varieties and curiosities, or plants carrying minute flowers, will find them represented by the following: *Bulbophyllum tremulum*, *B. barbigerum*, *Masdevallia xiphoides* (with its sensitive lip which gives a jump soon after being touched), *M. o'brientiana* (very similar to the curious *M. Simula*, commonly known as the Partridge in the Grass from the difficulty of discovering the flowers among the foliage), and *Pleurothallis macroblepharis*, or the Gnat Orchid. These are all in the botanical group, Division 3, Class 86. An Orchid to be specially noted is *Bulbophyllum virescens*, with its exquisite colouring. Another of the plants, the peculiar *B. Lobbii*, with an ever-moving lip, is sometimes called the Lady Orchid, suggestive of a constantly wagging tongue. Mr. J. Collier, the Orchid-grower, deserves the highest praise for these interesting groups.

Words fail to express in adequate terms the magnificence of the large group by Messrs. Charlesworth and Co. of Hayward's Heath. This group comprises *Miltonias* remarkable for their size, colour and general good quality; *Cattleyas* and *Odontoglossums* of the very highest order; while an imposing group of *Odontiodas* in richest hues of orange and crimson, intermingled with bold white spikes of *Phalaenopsis*, is most effective and forms a grand centre-piece to a truly magnificent display.

FERNS.

Just within the main entrance on the right-hand side will be seen one of the finest groups of Ferns one could ever wish to see. It is by Messrs. H. B. May and Sons, and comprises all the greenhouse Ferns worth growing, together with choice British species and varieties. No less than a 2,500 feet run of space is taken up by this colossal collection. Tree Ferns are dotted here and there in this huge bank of greenery. The Stag's-horn Fern is freely used, and magnificent specimens of *Davallia solida superba*, *Polypodium Knightæ*, *P. Mayii* and *P. Vidgenii* (an old species from Queensland reintroduced) are to be seen. No fewer than thirty species and varieties of Filmy Ferns under bell-glasses are included in this wonderful collection.

Messrs. J. Hill and Son, Lower Edmonton, are represented by two groups of grand rare exotic Ferns, including *Polypodium Knightæ*, *Blechnum braziliense*, *Platynerium Veitchii*, *P. grande* and *P. Willinckii*; also *Polypodium quercifolium*, *Dicksonia* (*Cyathea*) *Barometz* and *Cyrtomium Rochfordii*.

A choice collection of exotic Ferns is shown by Messrs. James Veitch and Sons, Limited. Among

the most interesting are *Adiantum farleyense* and its near ally *Glory of Moordrecht*, *Asplenium Nidus*, *Davallias fijiensis elegans* and *robusta*, *Osmunda palustris*, *Platynerium Aleicorne*, *grande* and *Veitchii*, *Polypodium Knightæ* and *Pteris Childsii*.

A fine bank of hardy Ferns from Mr. Amos Perry is to be seen in No. 4 Tent. The group comprises a fine assortment of Royal and Hart's-

greenhouse Ferns in No. 6 Tent. *Adiantum farleyense* and *Nephrolepis Marshallii*, both in thumb pots, are remarkably good. Visitors should note the gold and silver Ferns (*Gymnogrammas*), the Climbing Fern, or *Lygodium japonica*, and the Coral Fern, *Gleichenia longipinnata*, and its near relative *G. flabellata*.

Mr. W. A. Manda, South Orange, New Jersey, U.S.A., is showing some magnificent specimen Ferns in Class 94, for 200 square feet. Among his best plants are *Polypodium mandaianum* (new and sterile), *Nephrolepis President Roosevelt* and *N. viridissima*. *Polypodium mandaianum* is also well shown in the class for specimen Ferns. It is a novelty worth noting, with handsome fronds six feet and more in length. These Ferns look none the worse for their journey of 3,000 miles.



ODONTIODA QUEEN MARY, A BEAUTIFUL NEW ORCHID SHOWN BY MESSRS. CHARLESWORTH AND CO.

tongue Ferns, also *Polypodiums*, *Athyriums* and *Polystichums*. Among the best plants are *Athyrium Filix-femina todæoides*, *Adiantum pedatum*, and *Polystichum angulare frondosum* Lowii.

Mr. H. N. Ellison, West Bromwich, is showing an admirable collection of *Adiantums* and other

the Embankment end of the large tent. Here are displayed in wonderful variety many of the more interesting and better subjects, such as Golden Oaks, Japanese Maples, large specimens of avenue trees, such as Limes, Norway Maples, Golden Elms, Purple and other Oaks, *Kæmpferia* and Maples in variety

TREES & SHRUBS.

Quite remarkable and most interesting is the large group of new Chinese plants collected by Mr. E. H. Wilson. This group is set up by Messrs. James Veitch and Sons, Limited, Chelsea, S.W., and covers no fewer than 2,000 feet. Vines are displayed in charming variety. *Rubus flagelliformis* is exhibited, and is one of the most beautiful of the Chinese climbing plants. Hollies are also most noteworthy, *Ilex Fargesii* and *I. continentalis* both being conspicuous for their distinct character. *Ilex Peryi* is another unique variety. The Chinese Walnut (*Juglans cathayensis*) is shown with young fruits just developing. There are some beautiful *Berberis* in this group of novelties, those worthy of notice being *B. Gagnepainei* and *B. Wilsonæ*, which is covered with coral red berries in the autumn. A beautiful evergreen *Berberis* is *B. verruculosus*—this is to be seen in excellent condition. *Astilbe Davidi* and *A. grandis* are two fine plants that are just developing their spikes of blossom. The foregoing are just a few of the plants that are destined to add to the attractiveness of the garden and landscape in the near future.

Trees and shrubs are shown in a charming manner by Messrs. Fisher, Son and Sibray, Limited, Handsworth, Sheffield. This firm have an excellent reputation for the better subjects under this heading, and their present exhibits serve to maintain their reputation. A group of beautiful *Acers* was much admired; but their chief exhibit is at

Exceptionally fine are *Dimorphanthus alba* and *D. aurea*, which give one the impression of making large and handsome trees. A groundwork of *Rhododendrons* adds to the effect of this fine group.

Clipped trees and bushes are always a feature at the great shows of this country, and on the present occasion they are well done. One collection represented peacocks, tables, crowns, stags and numerous other devices in well-grown specimens of Box and Yew; and in the same group beautiful Bays are exhibited in the pink of condition in standard, pyramid and other forms of culture. The foregoing come from Messrs. Jackman and Sons, Woking, Surrey, who are renowned for their topiary work.

Among the most noteworthy features of this memorable exhibition are the magnificent groups of *Rhododendrons*; all the leading specialists are represented. Exceptionally beautiful are the *Rhododendrons* from Messrs. John Waterer and Sons, Bagshot, Surrey. Their group covers an immense area, and represents these showy plants at their best. Pink Pearl is finely shown, as are the newer *Coronna* (a beautiful flesh pink sort), *Duchess of Connaught* (marked green on white ground), *Mrs. Holford* (a very beautiful rosy red), *W. E. Gladstone* (a very noble-looking flower), *Cynthia* (a deep rose), and *Doncaster* (a brilliant scarlet-crimson sort, bearing a most profuse display of blossoms) are among the best. Standards and bush specimens are charmingly displayed, and, as a whole, the exhibit is most comprehensive.

A bright and pretty group of *Rhododendrons* is that from Messrs. Fletcher and Brothers, Otter-shaw, Chertsey, Helen Paul (pale flesh pink), John Bennett-Poë (rich rose) and Duke of York (flesh pink, with large individual flowers) being the more novel sorts among an interesting collection of freely-flowered plants.

A remarkably fine collection of gorgeous plants of the hardy *Azaleas* is one of the special features of this great show. *Azalea mollis*, *A. m. sinensis*, *A. rustica*, *A. ponticum* and Ghent *Azaleas* are represented by freely-flowered plants in wonderful variety. Of *A. mollis sinensis*, variety *Apple Blossom*, *Prince of Orange* and *Dr. Reichenbach* are magnificent; of the Ghent *Azaleas*, variety *occidentalis* and *o. Exquisita* (new) are superb, besides an immense array of glorious things far too numerous to mention. This group is set up by Messrs. R. and G. Cuthbert, Southgate, Middlesex, and the arrangement and composition of the exhibit leave nothing to be desired.

A pretty group of hardy *Azaleas* is also shown by Messrs. Cutbush and Son, Highgate and Barnet. Profusely-flowered specimens of many varieties of all the well-known species and hybrids are in evidence in a charming group.

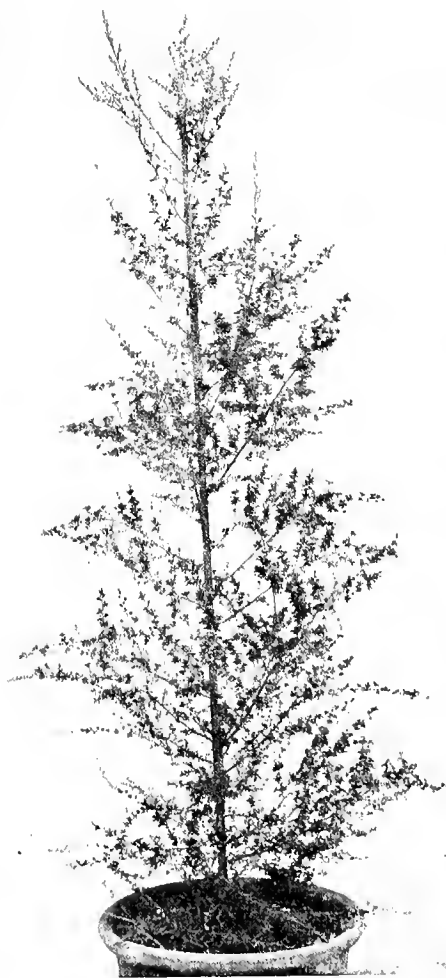
Hardy *Azaleas* from Messrs. J. Veitch and Sons make a grand bank of colour, the plants being large, freely flowered and beautifully fresh. A grand bank of *Lilacs* from this firm creates a most cool and refreshing effect. The plants are fresh, clean and profusely flowered, and there is great variety.

Messrs. Hugh Low and Co., Enfield, have a capital representation of the Bottle Brush Tree, in good form and condition, set up in their large and comprehensive group at the north end of the big tent. Both the original and the white forms are exhibited in standard and bush plants, as well as in pyramidal form.

In the Dutch Section hardy *Azaleas* are most artistically grouped by Messrs. M. Koster and Sons, Boskoop, Holland. Our Continental friends

have the advantage over English exhibitors of being able to set up their plants with real artistic effect, and the creation made by this firm is distinctly pleasing and almost fascinating. The colours of the flowers are superb, and this effect is heightened by the association of beautiful deep-coloured Japanese Maples. Queen Alexandra, Falstaff, King Lear, T. C. van Tol, Ellen Cuthbert and Laertes are all very beautiful.

A large and comprehensive collection of *Lilacs* and *Roses* are exhibited in the Dutch Section by the growers of these subjects at Aalsmeer, Holland, representing the products of the growers in this locality. The *Lilacs* are set up in very large gilded baskets in a most artistic way, and the



LEPTOSPERMUM SCOPARIUM NICHOLII,
SHOWN BY THE REV. ARTHUR T.
BOSCAWEN. (See page 261.)

group, as a whole, is charming in every way. Lilac-coloured sorts are Charles Dix, President Grevy and Souvenir de Louis Spath. White sorts are Marie Legraye and Marie Lemoine, the latter being a beautiful double variety.

Messrs. John Jefferies and Son, Limited, Cirencester, stage a very excellent group of conifers in wonderful variety in a space 500 feet square. The specimens have been lifted, and are set up in baskets. Many individual specimens merit high commendation, and the group embraces numerous choice and beautiful examples of coniferous plants. *Abies Veitchii*, *A. pungens*

glauca kosteriana pendula, *A. arizonica*, *A. pungens glauca*, *Cupressus lawsoniana gracilis*, *C. l. pyramidalis alba spica*, *Cedrus Deodara aurea*, *Cupressus lawsoniana Olbrichii*, *Picea nordmanniana*, *Abies albertiana*, *Thuja Lobbii siddingtonensis*, *Sciadopitys verticillata*, *Taxus elegantissima*, *Cupressus lawsoniana filiformis elegans*, *C. l. lutea gracilis* and *C. l. Stewartii* are some of the more noteworthy specimens of these wonderful trees.

In a competitive class for twenty-five conifers, distinct, *Taxads* excluded, Messrs. John Waterer and Sons have a very beautiful exhibit. The group is set up under the trees in the main avenue, and the plants are most attractive. The better specimens are *Abies concolor*, *A. lasiocarpa*, *A. pectinata pendula*, *A. nobilis* variety *glauca*, *A. nordmanniana*, *Juniperus virginiana glauca*, *Tsuga Sieboldii*, *T. mertensiana*, *Pinus contorta*, *P. Coulteri*, *P. muricata*, *Cupressus lawsoniana* variety *densa gracilis*, *Picea pungens*, *P. p. orientalis*, *P. polita* and *Abies sachalinensis*.

Bays as shown by Messrs. James Veitch and Sons, Limited, Chelsea, are exhibited in a manner never seen before. Two triangular corners on the lawn outdoors serve to display an extremely large assortment of specimen trees and bushes growing in tubs, and the plants are all in the pink of condition. Pyramid bushes and large and medium sized mop-headed or standard specimens are disposed on the grass in a charming way, displaying the beauty of this subject most effectively.

Ornamental trees and shrubs are charmingly set up by Mr. L. R. Russell of Richmond and Tunbridge Wells. A secluded spot in the outdoor garden, with a natural setting of dark foliage, displays these variegated and ornamental trees and shrubs in a manner seldom seen at these great shows. Here are to be seen beautiful specimens, showing the possibilities of the subjects when planted in their permanent positions. A few of the most noteworthy plants are *Vitis* in variety, Japanese Maples, *Ceanothus*, *Cytisus*, American Maples, Bamboos and numerous other ornamental trees and shrubs. This fine group is enhanced by a grand collection of Tree Ivies in grand condition, the colour being most noteworthy. *Hedera dentata variegata* is a beautiful Ivy that stands out in significant fashion. An imposing group of *Bambusa*, *Arundinaria* and *Phyllostachys*, set up by the same exhibitor, is a noteworthy exhibit. The graceful and decorative value of these plants is borne in upon the visitor as each subject in the group is inspected in turn, and there is little doubt such an exhibit must tend to make the Bamboos, &c., increasingly popular. The group comprises an area of 300 feet.

Messrs. W. Cutbush and Sons, Highgate and Barnet, have been for so long associated with the development of topiary work that their large and comprehensive display of clipped trees and shrubs comes as no surprise. The specimens are in a beautifully fresh condition, and they include Box in fresh green growth, Yews and Bays, peacocks, pheasants, anchors, stags, ships, tables and numerous other devices being remarkably well done.

Superbly fine is the group of Japanese Maples from Messrs. John Waterer and Sons, Limited, Bagshot. Handsome individual specimens, as well as dainty plants, are represented in this noteworthy exhibit of 300 square feet in the competitive classes. Exceptionally fine specimens

of *Acer palmatum dissectum*, *A. p. purpureum* and *A. japonica aureum* are most conspicuous. *A. crataegifolium*, *A. septemlobum* and *A. palmatum lutescens* are also very fine. A non-competitive group from the same firm of about 4,000 feet, representing *Kalmias*, *Viburnums*, *Rhododendron odoratum*, Thorns, Hollies, standard and pyramid, conifers in great variety, besides Maples and numerous other noteworthy plants, are in evidence. *Retinospira recta*, *R. obtusa densa aurea* and *R. filifera* are three magnificent conifers.

A group of flowering and foliage plants arranged for effect, to cover a space not exceeding 400 square feet, found two entrants, which, as a whole, was a beautiful diversion from the many other subjects arranged in close proximity. The group from Mr. R. C. Notcutt, The Nursery, Woodbridge, Suffolk, was a capital effort, although somewhat too crowded to do justice to the numerous plants set up. Flowering plants largely preponderated, the most conspicuous and noteworthy of these being *Oleari astellulata*, *Viburnum plicatum*, *Cytisus prostrata grandiflora*, *C. andreana* and *C. andreana prostrata*, *Spiraea confusa*, *Fabiana imbricata*, *Philadelphus Bouquet Blanc*, *Rhododendron Pink Pearl*, *Kalmia latifolia*, *Deutzia Lemoinei* and *Cytisus purpureus incurvatus*; of the foliage plants, *Acer palmatum rosea marginata*, *Cornus mas elegantissima* and *Prunus Pissardii*.

In the same competition as the foregoing Messrs. Fisher, Son and Sibray, Limited, Handsworth, Sheffield, set up a very dainty and artistic group. The disposition of the different subjects leaves nothing to be desired. Of the foliage plants the more noteworthy are *Ginkgo biloba*, *Cotoneaster Franchetti*, *Dimorphanthus aurea* and *D. alba*, *Rhododendron Countess Fitzwilliam*, Japanese Maples in variety, Japanese Vines, Tree Ivies, and the new *Aucuba japonica* Fisher's variety, all of which combine to make a beautiful group in conjunction with flowering plants of a diverse kind. The artistic disposition of the plants in this group is very noticeable, and the effect is most pleasing.

Outside, near to the Administration Offices, Messrs. W. Fromow and Sons, Chiswick, W., have a group of hardy trees and shrubs, mainly Japanese Maples. There is much to interest lovers of beautiful trees and shrubs in this group, and the disposition of the subjects is effectively carried out.

A group of hardy flowering trees and shrubs is shown outdoors near to the area devoted to rock gardens. This is set up by Messrs. Jackman and Son, Woking, and represents a great variety of plants that should succeed well in the neighbourhood of large towns. Among other useful subjects are Tree Ivies, Box, Yews, Hollies, Elders, Maples, Berberis, *Prunus Pissardii*, *Viburnums*, *Laburnums* and many useful plants for gardens in smoke-laden areas.

Superb aptly describes the group of conifers charmingly disposed by Messrs. John Waterer and Sons, Limited, Bagshot. This is a most praiseworthy exhibit, and includes a thoroughly representative series of plants. The grouping is especially effective, and under the cool and shade of the trees of the main avenue this display of 500 feet of these beautiful subjects looks most effective—*Retinospira obtusa Crippsii*, *Thuja occidentalis* variety *Douglasii*, *Cupressus lawsoniana* variety *Wissellii*, *Juniperus virginiana* variety *tripartita*, *Retinospira obtusa nana aurea*, *Abies arizonica*, *Thuja orientalis* variety *semperaeurens*, *Tsuga mertensiana*, *Pinus Cembra*, *Abies Veitchii*, *Picea Pinsapo* and *P. Omorika*, besides a host

of choice things. The same firm staged a charming group of variegated, golden, silver and glaucous conifers in a space 250 feet square. The specimens in this instance are most attractive and beautifully diversified in their character. This is to be seen in the main avenue outdoors under the trees. Among other noteworthy specimens are the following: *Tsuga canadensis* variety *alba spica*, *Juniperus communis* variety *alpina aurea*, *J. japonica* variety *aurea*, *Pseudotsuga Douglasii* variety *glauca elegans*, *Cupressus nootkatensis* variety *albo-variegata* and *C. pisifera* variety *aurea*.

Four hundred feet of Hollies from Messrs. John Waterer and Sons, Limited, Bagshot, make a magnificent exhibit. In this collection are many species and beautiful varieties of the originals. The group is displayed in the main avenue under the trees, and is most effective. *Ilex latifolia*, *I. Pernyii*, *I. cornuta*, two fine specimens of the species of Silver Weeping and Golden Weeping *I. Wilsonii*, *I. Mundayii*, *I. Aquifolium* variety *Golden King*, *I. crenata*, *I. c.* variety *aurea* and *I. Aquifolium* variety *Watereri*, better known as *Waterer's Golden Holly*, are shown. Of the green-

which is seen to advantage under the subdued light of the trees in the main avenue. *Rhododendron Pink Pearl*, hardy Azaleas and *Ceanothus divaricatus* are to be seen well disposed among a host of beautiful hardy foliage plants. *Pittosporum engenoides*, *Elæagnus japonica macrophylla*, *Cedrus Deodara* variety *aurea*, *C. D. alba spica*, *Acer palmatum sanguineum* and *Griselinia macrophylla* are some of the more interesting subjects in this exhibit.

Messrs. G. Paul and Son, Cheshunt, Herts, conceived the excellent idea of grouping a number of competitive classes together for effective purposes, and in this they are singularly successful. In this wonderful group there are 400 square feet of Hollies, twelve Taxads, two Portugal Laurels, twenty large specimen Hollies, each of which varies from 8 feet to 13 feet in height, and some are 7 feet in diameter. Noteworthy specimen Hollies are Weeping Silver (a splendid standard), *Ilex tortuosa* and *Waterer's Gold* (fine bush plants). The Yews are also very fine.

A most fascinating collection of clipped trees and shrubs from Messrs. J. Piper and Son, Bayswater, calls for special mention. Birds in variety,



AZALEAS SHOWN BY MESSRS. R. AND G. CUTHBERT.

leaved varieties, additional sorts are *I. doningtonensis*, *I. ferox*, *I. Sheppardii* and *I. camelliaefolia*, all of which contribute to a group that is somewhat unique.

Messrs. Liberty and Co., Limited, have a most interesting exhibit of Japanese ornaments and dwarf trees in wonderful variety in the main avenue under the trees. Here are to be found Japanese ornaments for the garden in stone, bronze and Bamboo, besides quite a good collection of their dwarf trees, which have become so popular of late. This exhibit is meant to illustrate the accessories of a Japanese garden, and this it does most effectively.

A group of conifers arranged on a space of 500 square feet is shown by Messrs. Jackman and Son, Woking, Surrey, and this embraces a most charming and beautiful selection of plants in tubs in splendid condition. The disposition of the different subjects leaves nothing to be desired. As a collection of coniferous subjects the group is splendidly representative, many noteworthy examples being in evidence.

Messrs. Dicksons, Limited, Chester, have a large, clean and bright group of hardy trees and shrubs,

spiral Yews, hoops, baskets, vases, a loving-cup, a dog and numerous other devices are displayed. The whole collection is enclosed in a fence of live Box, the round pillars and upright staves being represented in a unique manner. This group is in the competitive class, and is arranged outdoors.

In addition to a charming group of *Rhododendrons* mentioned elsewhere, Messrs. Jackman of Woking, Surrey, have a series of groups of other subjects at the north-east end of the big tent. Here are to be seen artistically-arranged exhibits of Clematises, hardy Azaleas, a group containing *Kalmias*, *Hydrangea*, *Viburnums*, *Weigela*, *Philadelphus*, *Spiræas*, *Andromedas*, *Cytisus*, *Laburnums*, *Phlomis*, *Escallonia* and *Ceanothus*, and another group of herbaceous plants. The group of Clematises has an especial cooling effect; the plants are in excellent condition and bear beautiful blossoms. *Lady Northcliffe*, *Mary Boislett*, *Lord Neville*, *Jackmanii rubra*, *Nellie Moser*, *Belle of Woking* (double), *King Edward VII.* and *Mrs. Hope* are among the best sorts in evidence.

A wonderfully varied collection of new trees and shrubs is exhibited in the large tent by the Hon. Vicary Gibbs, Aldenham House, Elstree,

Herts. This group promotes considerable interest, as the plants were raised from seeds collected by Mr. E. H. Wilson during his last two journeys to China. The seeds were gathered from trees and shrubs growing at high altitudes, so that their fitness for cultivation within the United Kingdom is practically assured owing to this fact. Notable specimens among this large and varied collection of plants are *Cedrella sinensis*, *Ailantus vilmoriniana* and a new *Paulownia*. The plants are shown in pots, and many of the *Rubuses* are less vigorous than when growing in the open. Other noteworthy shrubs in this exceedingly interesting collection are *Acer Henryii*, *A. Davidii* and *A. Wilsonii*, a capital trio. A beautiful climber, now fairly well known, is *Actinidia sinensis*. Distinct and attractive *Alders* are *Alnus lanata* and *A. cremastogyne*. Other subjects, such as *Berberis*, *Deutzia*, *Cotoneasters*, *Corylopsis*, *Rhododendrons*, *Ribes* in variety and a beautiful series of ornamental Vines, are included in this large and comprehensive group, for each of which there are many uses.

HARDY HERBACEOUS PLANTS AND ALPINES.

This section is exceedingly well represented in all classes, not a few of the exhibits proving of great excellence. In the large non-competitive class of some 300 feet in extent, no exhibitor brought or staged such an admirable lot of alpine and hardy plants generally as Sir Everard Hambro, K.C.V.O., Hayes Place, Hayes, Kent (gardener, Mr. J. Grandfield), the collection comprising one of those rich and extensive displays of alpine vegetation which have made the Hayes collection famous in many places where these things are grown. Singularly rich in mountain plants generally, we direct particular attention to such rarities as *Erinacea pungens*, *Jankaea Heldreichii*, *Asperula suberosa rosea*, *Primula Veitchii*, *P. cockburnana* and other choice species. *Oenothera ovata* was a charming plant in this group, while the almost endless array of *Saxifrages* and *Androsaces* added lustre and greatness to Hayes and its associations with alpine plants.

In No. 2 Tent Messrs. Wallace and Co., Colchester, have arranged a delightful lot of *Ixias*, *Sparaxis*, *Brodiaeas*, *Liliums* and *Calochorti*, the latter embracing a delightful array of colour and form in these too rarely seen Californian bulbous plants. The finest plant in the group in all probability was *Lilium myriophyllum*, a delightful trumpet Lily from China with very narrow leaves.

In the group from Messrs. Thomson and Charman, Bushey, are to be seen excellent examples of *Saxifragas*, *Primulas* and the not ineffective *Mimulus radicans*.

In this same tent Messrs. Artindale and Sons, Sheffield, have a charming lot of things, well grown and pleasingly arranged. The examples, too, for the most part, were in specimen form, and in this way the plants told their own tale. *Cypripediums* of the hardy kinds, as *C. pubescens*, *aculea parviflorum* and *montanum* are all represented in the group, while such things as *Primula lichiangensis*, *Onosma alba rosea*, *Phloxes* in variety and *Aquilegia glandulosa* were all important items in this fine group of plants.

Messrs. Kelway and Sons, Langport, in one of the large tents have a delightful lot of single *Pyrethrums*, *Gaillardias*, *Heucheras* and *Tree Pæonies*. The *Pyrethrums* are a rich and telling lot, delightful in their variety, pleasing in their colour and beauty.

Queen Mary (pink flower), Mrs. W. Kelway (single pink), Langport Scarlet and *Cassiope* are among the finer forms worthy of attention in this fine lot of hardy herbaceous flowers.

Messrs. Lilley, Guernsey, have a pretty and unusual display of *Sparaxis*, *Irises*, *Gladioli*, *Brodiaeas*, *Ixias* and the like, and the group is worthy the attention of our readers by reason of its variety, excellence and beauty.

Messrs. Rich and Co., Bath, have a very pleasing arrangement of *Pyrethrums* in Tent No. 2, and all interested in these showy hardy flowers should search them out and see what they have in store for the hardy plant garden generally.

Near by, Messrs. G. and A. Clark, Limited, Dover, have a showy group of *Irises*, *Thalictrums*, the new double *Geum* Mrs. J. Bradshaw and a very charming lot of single *Pyrethrums*, which are showy in the extreme.

Messrs. Harkness and Sons, Bedale, Yorks, have a very handsome exhibit of *Verbascum*s, *Lupines* and *Globe Flowers*, the latter including such things as *His Majesty*, *Gold Crest*, *Bessie Walker*, *Triumph* and *Miss Willmott*. *Verbascum International* (a yellow bronze variety of great size of blossom) is also to be seen on the stand of this firm.

The *Eremuri*, *Iris*, *Trollius*, *Phlox*, *Verbascum* and *Lupines* from Messrs. Artindale, Sheffield, are well worthy of inspection, and as a showy lot will well repay a little study.

From the famed nurseries of Messrs. George Bunyard and Co., Maidstone, have come a superb lot of *Oriental Poppies*, *Pyrethrums*, *Eremuri*, *Lupines*, *Ixias*, *Verbascum*s and other plants, the whole making a sumptuous gathering of the best hardy flowers of the moment.

In this same tent, Mr. M. Prichard, Christchurch, again excels, and his stand of *Iris*, *Eremuri*, *Pyrethrums*, *Pæonies*, *Lilies* and *Poppies* are things to look for, things to admire, and something to remember.

Mr. Reginald Farrer, Craven Nursery, Clapham, Yorks, has one of the choicest exhibits in the entire show, a group rich in alpine, dominating in cultural excellence and appealing by reason of rare beauty and merit. It is one of the collections of alpine to which we would send all our readers; one also wherein much of the charm of alpine vegetation will be found, and from which may be gathered much useful information. Of the more noteworthy examples we may instance the lovely *Tyrolese Daphne rupestris*, with its crowd of pink blossoms above a tuft of growth 3 inches or so high, which is a gem of the first water sufficient to charm and delight all lovers of these plants. *Edraianthus serpyllifolius major*, with its mass of royal purple bells strewn the floor, and overtopped by graceful panicles of *Saxifrages*, is something to look for and something to remember. It is suggestive, too, in its garden effect and beauty. *Ramondias*, *Haberleas*, and *Primula farinosa*, in a rich and delightful colony, constituting, as it were, the herbage of moist upland pasture, is a sight alone. *Ranunculus parnassifolius* is a serenely pure and lovely white alpine, while the *Trilliums*, *Cypripediums*, *Ramondias*, *Haberleas*, *Campanula Allioni*, *Androsaces* and *Primulas* constitute such a feast of these plants as is rarely got together. Choicest of the choice, this is one of the exhibits under canvas for which the alpine-lover must seek, and, having found it, make sure that he will not be sent empty away.

In a large Lily group, Messrs. Wallace and Co., Colchester, have arranged many of their finest

specimens, such species or varieties as *Hansonii*, *Batemannia*, *Leucanthemum myriophyllum*, *tenuifolium* and *japonicum colchesterense*, also known as *odorum*, appealing to the specialist at once. It is a veritable feast of the tribe, something not to be missed by those who seek for the best of everything.

VIOLAS.

Violas (Tufted Pansies) are shown by Messrs. W. Artindale and Son, Sheffield, as growing plants. Freely-flowered specimens growing in boxes call for special mention. Some sixty boxes are shown by this firm in the class for 100 feet of *Violas*, and they serve to illustrate the free-flowering propensity of these plants and their great diversity of markings and colouring. A few of the better sorts are *Moseley Perfection* (a grand yellow), *Lady Knox* (primrose), *Acme* (plum), *A. S. Frater* (white, edged heliotrope), and *Kathleen* and *Gladys Finlay* (two good fancy flowers).

A pretty series of twenty pans of growing plants are shown by Messrs. Whitelegg and Page, Chislehurst, Kent. In most cases the plants are flowering profusely, the more striking examples being *Acme*, *Peace*, *Councillor Waters*, *Mrs. Chichester*, *Bridal Morn* and *Marchioness*.

Messrs. Rich and Co., Bath, have a small exhibit of *Violas*. Individual blooms are placed in tubes let into velvet-covered boards. The effect was not good.

For the 100-foot group of *Violas*, Messrs. Gunn and Son, Olton, Warwickshire, are showing lifted plants packed tightly in round baskets, and in this way they make a most effective display. The best varieties are *Viola cornuta purpurea*, *Moseley Perfection*, *Colonel Wolferston*, *Madge*, *John Quinton*, *Bronze Kintore*, *Swan*, *James Pilling*, *Belfast Gem*, *J. Rowlands*, *Dr. McFarlane* and *A. J. Bastock*. The same firm are competitors in the class for twenty baskets of *Violas*, growing plants, showing specimens basketed in precisely the same way and many of the same varieties as are exhibited in the larger group. This firm has done well to keep their stock in such healthy condition.

SWEET PEAS.

NON-COMPETITIVE.—IN THE CUT FLOWER TENT.

Messrs. Dobbie and Co., Mark's Tey, Essex, are staging an excellent exhibit of *Sweet Peas*, both as cut flowers and growing on the plants. The latter, which form a natural background, are growing in boxes and are 9 feet high, comprising standard varieties and novelties. The cut blooms embrace *Dobbie's Scarlet* (a striking scarlet variety, carrying in nearly all cases four flowers on a spray), *Dobbie's Cream* (a large, well-formed flower), *Lady Miller* (apricot pink), *Brunette* (of a pure self mahogany colour), *Decorator* (a pleasing shade of old rose) and *Melba* (one of the largest *Sweet Peas* in cultivation, having flowers nearly three inches in diameter). Some splendid specimens of *Mrs. W. Cuthbertson* are staged, the sprays in question bearing from four and five to nine individual flowers on a spray, the largest of which is fasciated. *Lady Knox*, one of the best cream varieties, with buff tints, is in good form, and *Mauve Queen* was also noted.

Robert Sydenham, Limited, Tenby Street, Birmingham, have a representative collection containing several choice varieties. *Lilian* (pale salmon pink), *Barbara* (another pleasing shade), *Edith Taylor* (glowing rose), *Lady Evelyn Eyre*

(an improved form of Mrs. Hardcastle Sykes), Scarlet Emperor (a very strong-growing variety), Iris (salmon pink), Mrs. T. W. Warren (a waved form of Helen Pierce) and Charles Foster.

Another excellent exhibit is that staged by Mr. C. W. Breadmore, High Street, Winchester, and many well-finished blooms are shown. Special notice must be made of Aggie Elder (rosy cerise in colour and of good form and substance), Princess Mary (bright blue and shot wings, flowers being borne in fours), Lord Curzon (bright magenta), Flossie Jeffery (pale shrimp pink), and Iris (a deeper shade of the foregoing variety). Frilled Cream is denoted by its name, and is a seedling of the present year. A spray of Elsie Herbert is to be noticed bearing eight flowers.

Mr. C. W. Breadmore also stage a collection, comprising seventy specimens of Sweet Peas in all the best varieties, grown in tubs on "Simplicitas" netting.

Messrs. R. H. Bath, Limited, The Floral Farms, Wisbech, also have a special stand of Sweet Peas, notable varieties shown being Felicity (a variety which will be now shown as Mauve Queen, and is identical in colour with Dobbie's Mauve Queen, the latter variety securing a first-class certificate

of novelties of their own raising, the principal varieties being Helen Williams (picotee edged, and of a brighter colour than Mrs. C. W. Breadmore), Margaret Cook (a giant bicolor, pale old rose standard, and cream wings veined rose), The Lady (a fine, bold flower of perfect form), Fair Maid Improved (a giant Spencer, flesh on cream ground, a very pretty flower), Stark's Salmon (a robust grower which stands the sun well), Emmie Tatham Improved (a charming shade of old rose), Mrs. R. W. Pitt Improved (a bright crushed strawberry Spencer) and Florence Wright Spencer (pure white, of good form and substance).

Mr. C. W. Breadmore is showing a most interesting and varied collection embracing all the novelties which he has staged in his non-competitive group.

Mr. W. E. Alsen is staging the new double variety Annabel Lee (a pleasing lilac shade, with paler centre), Bobby Stewart (pale delicate lilac), Money-maker (pure white, a good flower), Minnie Furnell (a pleasing salmon pink), also a fine bunch of R. F. Felton, Melba, Stirling Stent and George Stark.

Messrs. Lumley and Co. are showing some varieties of excellent merit, including Veronique (a marbled Spencer of good form and striking

Holmes, Empress, Nubian, Zephyr, Elsie Herbert, Doris Usher and Freda.

For a group of Sweet Peas consisting of varieties sent out since September, 1910, there are two entries, the principal varieties being Nettie Jenkins, Royal Rose, Charles Foster, Dobbie's Cream, Elfrida Pearson and Empress.

Class 310: First, Mr. C. W. Breadmore; second, Mr. W. E. Alsen, Denmead Nurseries, Cosham, Hants; third, Messrs. W. Lumley and Co., Hayling Island, Hants.

Class 311: First, Sir Randolph Baker, Bart.; second, Mr. L. H. Hatting, The Nest, Hornchurch, Essex; third, the Birmingham Industrial School, Shustoke, Warwickshire.

FRUIT.

NON-COMPETITIVE. IN LARGE TENT.

The King's Acre Nurseries, Hereford, are showing an extensive collection of fruiting trees in pots, among which we noted some fine specimens of Apples, Pears, and Peaches, which are very good for the season; also a large trained specimen of Duke of York in a pot bearing several fruits. Figs are well to the fore, and the true variety of Osborn's Prolific is shown.

An excellent display was staged by Messrs. T. S. Rivers and Son, Sawbridgeworth, Herts, the well-known raisers and growers of many choice varieties. The visitor will not be disappointed on this occasion, as the new 101 Seedling Nectarine is well fruited and perfectly ready for table, being a week earlier than Early Rivers. This variety was raised from the white-flowered Nectarine, and we think will prove a useful variety for forcing work. A new second-early Peach, Kestrel, is also in good condition. A well-fruited specimen of Cherry, Guigne Annonay, is conspicuous. Plums are represented by Early Rivers, Curlew and Blue Rock, and Pears and Apples are well shown. Citrus are also an interesting feature as shown by this firm. Among the collection we noticed the Grape Fruit, White and Imperial Lemons, and Shaddocks. A very fine specimen of the Horned Orange, *C. corniculata*, also Maltese, St. Michael's and Seville varieties, and others with variegated foliage, are to be seen.

Leopold de Rothschild, Esq. (gardener, Mr. J. Hudson), Gunnersbury House, Acton, has arranged a most effective display for a private grower; it consists of a central avenue with a pergola, or series of arches, in the centre, which are covered with Virginian Creeper, and the top is ornamented with Vines bearing several bunches of Grapes, which are well finished for so early a date. The sides of the arches are made conspicuous by having fruiting Melons in pots at the base of each. These are remarkable for their healthy foliage, the two chief varieties shown being Eminence and Ringleader. Along both sides of the central avenue a large collection of pot fruit trees are staged, consisting of fifty varieties in thirteen kinds. Cherries, which are shown in twelve varieties, are a special feature. Peaches, Nectarines, Loganberry and Newberry, Strawberries, &c., make up the display.

Messrs. Laxton Brothers, Bedford, who are well known as Strawberry specialists and raisers, have the following new varieties to the fore: King George V., excellent for forcing, which it is anticipated will replace Royal Sovereign for this purpose, being a week earlier and of better flavour and colour than the latter, and a robust grower. Maincrop, for midseason work, has a very large, wedge-shaped fruit of exceptionally fine flavour. The Queen, considered equal



DECORATED TABLE OF DESSERT FRUIT SHOWN BY HIS MAJESTY THE KING IN CLASS 351. THIS WAS AWARDED THE GOLD MEDAL AND FIRST PRIZE, AND INCLUDED THE BEST FRUIT IN THE SHOW.

last year), Isabel (a pale pink of pleasing shade), Mrs. R. Hallam (creamy pink), Tennant Spencer (in good form), Scarlet Emperor, Edith Taylor, Dorothy (a charming pink shade), Thomas Stevenson (well finished), and Charles Foster (this variety coming remarkably well under glass).

Mr. J. Stevenson, Wimborne, is staging an extensive collection of up-to-date novelties, including T. Stevenson, Doris Usher (pink), Bertie Usher (blue flaked), Scarlet Emperor and Empress, May Campbell, Mrs. Cuthbertson and some good unnamed seedlings. All the Sweet Peas are in first-class condition. Indeed, it is really marvellous the colour, size and substance that growers have been able to impart to the flowers at such an early date, and the exhibits reflect the greatest credit on those responsible for the growing of the blooms.

COMPETITIVE. THESE EXHIBITS ARE STAGED IN TENT NO. 6.

Messrs. G. Stark and Son, Great Ryburgh, Norfolk, are staging an exhibit composed entirely

colour), The Abbot (a mottled pale chocolate variety), Mrs. E. Noakes, Avalanche and Constance Oliver.

Mr. J. Agate, Sea View Nurseries, Havant, has some good bunches of Captain Travers (bright orange), Mr. Herbert Lees (pink on a white ground), Barbara, Stirling Stent, Charles Stent (a large rose pink flower), Felice Lyne (a bright cerise shade which is very effective) and several other leading varieties.

Messrs. S. Bide and Sons, Farnham, also stage some good flowers, having a most interesting display.

Mr. J. Stevenson, Wimborne, also shows a collection in competition.

COMPETITIVE.—AMATEURS.

In the class for Messrs. Dobbie and Co.'s Cup, for a group of Sweet Peas not to exceed 6 feet by 3 feet, there are three entries. Sir Randolph L. Baker, Bart., Ranston, Blandford, has a very fine display, the varieties being Dobbie's Cream, Edrom Beauty, Hercules, Evelyn Hemus, Maud

in flavour to British Queen, which fruit it resembles in shape, is a robust grower and good cropper. The Earl is in every respect an improved Vicomtesse of similar flavour, a much larger fruit and as free a cropper. The Laxtonberry is a hybrid between the Loganberry and Raspberry, being quite as sweet as the latter, the fruit of which readily separates from the core, and has the habit of the Loganberry. Other specimens of fruiting trees of various kinds were staged.

IN THE FRUIT TENT.

Messrs. George Bunyard and Co., The Royal Nurseries, Maidstone, are staging a choice collection of seventy-five varieties of Apples, among which are to be noticed Farmer's Seedling, Blue Pearmain, Alverstone, well-finished, highly-coloured specimens of Smart's Prince Arthur (of large, conical form), Calville de Femmes, Calville Malingerie, Cox's Orange Pippin, Foster's Seedling, Belle Pontoise, Belle de Bois, Gros St. Clements and Sturmer Pippin. A handsome dish of Uvedale's St. Germain Pear is also shown.

Messrs. Storrie and Storrie, Glencarse, Perthshire, have a representative collection of hardy fruits as cultivated generally. They are also exhibiting Currants, fruiting in pots, in the following varieties: Black Naples, Red Dutch and White Transparent, finished off with a floral ground-work.

MELONS.

For the best-flavoured white-fleshed Melon, Mr. A. J. Thornhill secured first with a medium fruit of Hero of Lockinge, Mr. C. H. Beckett coming second with a larger fruit of the same variety, and the Horticultural College, Swanley, third with Elmcroft Beauty.

For a class of twenty-four Melons, not less than six varieties, Mr. C. H. Beckett, Chilton Gardens, Hungerford, stages a most excellent exhibit, which includes Countess and Barnet Hill Favourite; they are well finished and beautifully netted (first prize). His Grace the Duke of Westminster, Eaton Hall, Chester, also has a good display, which includes Eaton Seedling, Hero of Lockinge, Countess, Eminence, Cestrian and Scarlet Queen (second prize). Mr. C. F. Raphael, Porter's Park, Shenley, Herts, has a large exhibit of good fruits, the principal varieties being Universal, Ringleader and Royal Jubilee (third prize).

For one green-fleshed Melon, the Horticultural College came first with Emerald Gem, which is beautifully netted; Mr. W. B. M. Bird, Eartham House, Chichester, second with the same variety; and Mr. F. B. J. Wingfield Digby third with Buscot Park Hero.

For the best scarlet-fleshed variety, the Horticultural College led with a well-netted fruit of Superlative, Mr. C. H. Beckett coming second with Sutton's Scarlet.

For two varieties of Melons, one fruit of each, the Horticultural College took the lead with Superlative and Emerald Gem; second, Mr. F. B. J. Wingfield Digby with Hero of Lockinge and Greengage.

GRAPES.

For one black and one white variety, two bunches of each, the Marquis of Salisbury, Hatfield House, secured first with good bunches of Muscat of Alexandria and Black Hamburg. Mr. R. W. Perkins, Greenford, Harrow, obtained second with Black Hamburg and Foster's Seedling. Sir W. Greenwell, Marden Park, Caterham, took third with similar varieties.

For two bunches of Black Hamburg, the Trustees of the Duke of St. Albans (the Duke of Leeds), Bestwood Lodge, Arnold, obtained first with two well-formed and well-finished bunches. The Marquis of Salisbury came second and Mr. R. W. Perkins third.

For twelve bunches of Grapes, not more than three bunches of one variety, Lady Wantage was awarded first for a very pretty exhibit, including Madresfield Court, Foster's Seedling, Buckland Sweetwater and Black Hamburg; the bunches are beautifully staged, with an effective ground-work of Ferns.

For two bunches of Foster's Seedling, Sir W. Greenwell led with excellent bunches. Mr. R. W. Perkins came second and Mr. C. H. Beckett, Chilton Gardens, Hungerford, third.

His Grace the Duke of Portland, Welbeck Abbey, took the first prize for well-finished bunches of Foster's Seedling.

STRAWBERRIES.

For a dish of twenty fruits of Strawberries, the Earl of Lytton, Knebworth, Herts, came first, the Marquis of Salisbury second, and Mr. J. Adams, Leigside Nurseries, Lewes, third, all with Royal Sovereign.

For three varieties of Strawberries, Mr. F. B. J. Wingfield Digby, Sherborne Castle, Dorset, obtained second; no first was awarded.

For a collection of Strawberries, nine varieties, the Marquis of Salisbury took first with some splendid specimens of Bedford Champion, Leader, Royal Sovereign, Reward, Monarch, Utility, British Queen, The Bedford and Waterloo, all in excellent condition.

PLUMS.

For two dishes of Plums, distinct, the Duke of Westminster took first.

For a dish of Brown Turkey Figs, the Marquis of Salisbury led with well-coloured fruits, the Duke of Portland being second.

PEACHES AND NECTARINES.

For a collection of Peaches and Nectarines, three dishes of each, the Duke of Portland came first with some excellent examples of Duke of York, Alexander and Hale's Early Peaches, and Cardinal, Early Rivers and Lord Napier Nectarines.

For a dish of six Nectarines, the Trustees of the Duke of St. Albans led with Early Rivers, the Duke of Portland second with Cardinal, and Mr. C. H. Beckett third with the same variety.

For a dish of Peaches, the Duke of Portland took first place with Alexander, and the Trustees of the Duke of St. Albans second with Hale's Early.

For a collection of Peaches and Nectarines, three dishes of each, the Trustees of the Duke of St. Albans were awarded second with Peaches Hale's Early, Amsden June and Duke of York, and Nectarines Early Rivers and Cardinal.

COLLECTIONS OF FRUIT.

For a collection of nine dishes of fruit, His Majesty King George V. shows splendid examples from the Royal Gardens, Windsor, including some excellent bunches of Grapes Foster's Seedling and Black Hamburg of good size and quality, Melon Eminence, Strawberry Royal Sovereign, Plum Jefferson (beautifully finished), Duke of York Peaches, Cardinal Nectarines, Brown Turkey Figs and Black Tartarian Cherries. Second prize was secured by Mr. F. B. J. Wingfield Digby with a large fruit of Premier Melon, Foster's Seedling and Black Hamburg Grapes, and others.

For a collection of twelve dishes of fruit, the Duke of Westminster led with a fine collection, Grapes being represented by Muscat of Alexandria, Black Hamburg and Madresfield Court; Nectarines, by Early Rivers and Lord Napier; Peaches, by Royal George and Hale's Early; Plums, by Transparent Gage; Cherries, by Bigarreau de Meyel; Melon, by Marchioness, of good quality and fine form; and some highly-coloured fruits of Apple Lady Sudeley. Second prize was secured by the Marquis of Salisbury, who shows the only Pineapple staged of The Queen variety, a fine specimen of Universal Melon, Muscat of Alexandria and Black Hamburg Grapes, Royal Sovereign and Waterloo Strawberries, Hale's Early and Amsden June Peaches, Lord Napier and Early Rivers Nectarines, Brown Turkey Figs, and Early Rivers Cherries.

The premier class for fruit is that for twelve dishes of dessert fruit, not less than six distinct kinds, decorated with plants and flowers. His Majesty the King took the leading honours with a most magnificent display, embracing black and white Grapes of excellent size, quality and merit, the varieties being Black Hamburg, Foster's Seedling, Madresfield Court and Muscat of Alexandria, all magnificent; Melons Eminence and Superlative, Peaches Amsden June and Duke of York, Cardinal Nectarine, Brown Turkey and White Marseilles Figs and Royal Sovereign Strawberry, the floral decorations being composed of Orchids and Liliums, most tastefully arranged. An illustration of this exhibit, which reflected the greatest credit on the King's head-gardener, Mr. Mackellar, and his staff, is given on p. 267. The fruit was the best we have ever seen in May. Second prize was taken by the Duke of Westminster, who also stages a grand exhibit, having some fine specimens of Emperor Melon, Muscat of Alexandria and Madresfield Court Grapes, Early Rivers and Lord Napier Nectarines, Royal George Peaches and Brown Turkey Figs, the whole being tastefully decorated with Orchids and choice flowers. The Marquis of Salisbury was placed third with some good examples of Melons, Strawberries, Peaches, Nectarines, Figs and Cherries, decorated with Carnations, Liliums, Sweet Peas and Selaginella.

FRUIT IN THE OPEN.

Messrs. James Veitch and Sons, Limited, Royal Exotic Nurseries, Chelsea, S.W., have a most effectively-arranged exhibit of fruiting trees in pots, plunged in the grass, representing the various methods of training. The use of the Loganberry for pergolas is demonstrated in a practical manner. Another special feature are Pears trained as vertical cordons and planted in straight rows, with specially-trained trees for the end of rows in order to utilise the whole wall space. Well-fruited horizontal-trained examples are Beurré Rance and Doyenné du Comice, Gooseberries, Plums, Cherries, Quinces and Apricots are also included, and some fine specimen standard Apples, with Mistletoe growing happily upon them, are planted at the entrance to the central avenue of the exhibit.

Messrs. Laxton Brothers, Bedford, also show examples of trained fruit trees, growing in pots, of many and varied shapes, in all the leading kinds. Two interesting hybrids may be seen in this display—the Cherry Plum, which is a hybrid between the Cherry and Plum, and the Peach Plum, a hybrid denoted by name.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, have a collection of trained trees in a variety of forms and of the leading kinds.

CARNATIONS AND PINKS.

The display of all kinds of Carnations is very fine. I have carefully gone round all the tents and seen all that was to be seen; but, unfortunately, as I have to complete these notes at an early hour, there were still some few to be staged. In my judgment I think the honours of the show will fall to Mr. C. Engelmann of Saffron Walden. An old hand at growing Perpetual-flowering Carnations on a very big scale, and who pretty well knows what has been done both here and in America, told me that he thought Engelmann's group in Tent No. 4 (the large tent) for competition in Class 217 is probably the best group ever staged. It is magnificent; the quality of the flowers and their grouping leave nothing to be desired. A large vase of Felton's Japanese basket-work holds a huge bunch of Elecktra, a delightful pink-tinted orange bloom. Pillars of choice varieties flank it on either side, and some vases fill in the intervening spaces. In Tent No. 2 the same exhibitor has fine examples of his six 1912 novelties—Elecktra, Salome (a weird combination of pink and dull mauve), Sunstar (a bright yellow, flecked with pink, named after the Derby winner of 1911 because it was first shown at the Temple on the day the big race was run—not a bad idea for a lucky name!), British Triumph (a bright maroon), Rose (a bright rose) and Lady Northcote (a salmon pink, a most lasting flower when cut, and very free). It has just received a first-class certificate from the Perpetual Flowering Carnation Society. Of quite different types, but equally beautiful, are the exhibits of Mr. James Douglas and Mr. Blick. Both stage choice border varieties, many of which are quite new. In Tent No. 6 the latter gentleman has a group of cut blooms, the two most interesting flowers in which are Queen Mary (a very sweet-scented pink) and King George. These varieties were presented to the Queen a few days before the Coronation, and she honoured them by naming one after the King and one after herself. Visitors will say the Queen is no bad judge of good flowers when they see them. In Tent No. 4 Mr. Blick has a group in pots. Caradive (a glowing vermilion and pale orange Picotee), and Victory, a pale rose pink and buff, are very taking flowers. These two fancy yellow-ground Picotees appealed to me very much. Some day we will have similar things in the Perpetuals, I am told. Mr. James Douglas has some beauties in his group in Tent No. 5, and his competition vases will have to meet something very good indeed to be beaten. Jean Douglas is a "top-hole" scarlet border variety of excellent shape, with large, smooth-looking, unserrated petals. It is a fine garden plant; in fact, Mr. Douglas considers it a *nulli secundus*, and he should know. It has just been put into commerce. Mrs. Henwood is almost its counterpart in white as Miss Willmott is in pink. Elizabeth Shiffner is a splendid orange buff, which was sent out, I think, last year. It reminds one of the old Mrs. Reynolds Hole somewhat in colour. I was surprised to hear how much Pinks are coming into favour for border and rockery decoration. Mr. Douglas has two nice new ones with his Carnations in Tent No. 5; they are named Simplicity and Captivation, and Bookham Gem is one of the best "laced."

Mr. G. H. Herbert has twelve huge four year old plants of his special variety, Progress. Each of them bears from eighty to one hundred fine rosy mauve blooms. It is a grand doer, and its freedom of flowering can be judged from

twenty-four small pots which are along with it. On the extreme east (next the avenue) of the monster tent the pot plants are staged in attractive groups. Those of Mr. C. Turner of Slough, Mr. H. L. C. Brassey, M.P. (gardener, Mr. Fitt), Mr. Mount of Canterbury and Mr. C. F. Raphael (gardener, Mr. Grubb) are arranged along the side, and very well they look. Mr. Raphael's flowers (Class 216) are very large, fresh and beautifully arranged. Princess of Wales, which the gardener considers the best Malmaison there is, occupies a big centre, and at the top corners are clumps of the lovely red Lady Coventry, and correspondingly at the lower corners are the Old Blush and the new Duchess of Westminster. Hard by these is a long attenuated first-quarter moon-shaped bed. The ground is *Statice profusa*, and five clumps of fine examples of Malmaisons come up out of it. Valetta (deep blush), Old Blush, Duchess of Westminster and Princess of Wales are the sorts chosen. It is an original and pleasing group. Not far, again, from this, in the same tent (No. 4), is the imposing exhibit of Messrs. Cutbush and Son. Great mounds of The Queen (*terra-cotta*), Lady

of colour. In Tent No. 2 I found a regular feast of Carnations (Class 223). I have already referred to Mr. Englemann's lot. Adjoining it are Messrs. Allwood Brothers with their *La Rayonnante* (large deep yellow, *the yellow up to date*), *Geisha* (heliotrope) and *Wivelsfield Wonder*, all displayed in the famous Coldrum vases; they have an attractive group. So, too, have Mr. Dutton and Mr. C. Waters. Mr. Dutton's Mrs. A. F. Dutton is one of the best, if not the best, of all rose pinks. It is a sport from *White Perfection*; it has all the good points of that variety, and, in addition, is doubly as free. The centre of the bloom is a deep rose, which seems to get lighter and lighter towards the circumference. It is most attractive in a big bunch. Mr. Waters has two useful items in *Edith Waters* and *A. E. Manders*, the former a bright cerise and the latter an orange and pale carmine striped. Both should be seen. In Tent No. 6, at the River end, there is a fine stand of good, well-known varieties from Mr. H. Burnett. The season has been a trying one for him, and as a result we have a smaller group than he otherwise would have staged. His Mrs. Raphael is one of my special



PORTION OF MESSRS. LAXTON'S GROUP OF FRUIT. THE STRAWBERRY IS THE NEW KING GEORGE V.

Coventry (scarlet) and Queen Mary (maroon, border variety) are conspicuous. The old yellow border *Cecilia* is well shown. It is still about the best yellow for the garden.

Messrs. Stuart Low and Co., in Tent No. 5, have two good banks; one is entirely of Perpetuals and the other Malmaisons. In the latter, *Princess Juliana* is most conspicuous. The firm list it as an orange, but it is a very pale shade. I found, however, from the examples displayed that many blooms were more of a pink than anything else. The bizarre effect is rather nice. Another novelty is the crimson-purple Malmaison *Cleopatra*. It is a large bloom, which lasts well and is sweet-scented. Among this firm's Perpetuals, *Baroness de Brien* (a fanged deep shade), Mrs. Burnett (pink) and *Cinnabar* (the curious dusky scarlet) took my eye. Some people, I hear, say the latter is small. I do not think any the worse of it for that. Poor flowers, you might be of no use unless you were mighty giants! The same fault might be found with Mr. C. Turner's Ruby (Class 221), which is one of the sweetest flowers I put my nose to in the show. Its name well describes its shade

favoured. In the same tent, not very far away, we have Chrysanthemums and Carnations from Mr. W. Wells. His fine, white, sweet-scented *Wodenethe* looks well, and is certainly all that is claimed for it in sweetness.

Other exhibitors whose exhibits were not staged, or which I missed, were Lord Burnham, Mr. Bell of Guernsey and Mr. Fisher. No one who is interested in Carnations should miss a visit to the French Section. M. M. L. Ferard, Henri Vacherot and Rivoire and Son each have examples of Carnations according to French taste. It goes without saying that they are tastefully arranged, and the blooms are shown to their best advantage. A new race, *The Colosse*, has been raised by M. Vacherot, and he has fine examples of six of them in his group. *Jupiter* (red) and *Diane* (flesh) are the ones I liked best. But my space is now written up.

With many regrets I lay down my pen, for justice has not been done to half of the lovely flowers that are waiting to be admired. To slightly alter a now historic saying, "Go and see."

J. J.

TULIPS.

Since first the date of the "International" was fixed, Tulip-lovers have looked forward to the big show as being the chance of a lifetime to place some of its most attractive classes before the gardening public. Everyone expected to see Darwins, Cottages, Parrots and Florists "by the acre." It was just the week for them; the schedule committee frames most suitable classes which seem to be going "merry as a marriage bell," when, for some reason or another, Jupiter Pluvius withdrew his kindly help and left old Sol to warm us up at least two weeks before we wanted to be. Hence, no Tulips—not literally, but figuratively. Five persevering firms have staged groups; but oh! the labour and anxiety entailed. One lot spent two weeks of their life in a cellar. How the others passed their time I know not; but there they are, and I ask all who read these lines to make the best of them. They will give those who do not know them a faint idea of the beauty. Let me especially ask readers to look at Excelsior, Thérèse Schwartz, Moralis, The Dove, Louis XIV., Clara Butt and Primrose Beauty at Hogg and Robertson's; at Inglescombe Yellow at W. T. Ware's, Limited; at Melicette, Eric, Orange King, The Fawn, Emerald Gem and Rosamond at Dicksons' of Belfast; at the old double blue Flag, Quaintness, Hammer Hales, Bouton d'Or, Ellen Willmott, Perle Royal, Carnation and Pride of Inglescombe at Barr and Sons'; at Blue Amiable, Farncombe Sanders, King Harold, Edmée, Galatea and Glare of the Garden at R. H. Bath's; and at Cygnet, French Crown and Velvet King at Jeffries'. Should Mr. Bentley be exhibiting florist varieties, they must not be missed. All the Tulip exhibits will be found in Tent No. 6. JOSEPH JACOB.

SCIENCE AND EDUCATION TENT.

Though less showy than those of some of the other tents, the contents of the Science and Education Tent are not of less interest to all who grow plants. Three exhibits outside call for mention, all relating to fruit trees.

That from Reading College illustrates the growth and training of fruit trees from the youngest to their full development.

That from the Woburn Experimental Station illustrates particularly the various insect attacks to which fruits are subject, all in working order, also silver-leaf, while another portion of the same exhibit illustrates the effect of grass on the growth of trees.

The fruit trees from the John Innes Institution show the self sterility and self fertility in Plums.

Inside, Dr. Russell of Rothamsted illustrates in a striking manner the effect of soil sterilisation by various means on the subsequent growth of plants; and Dr. Brenchley, from the same station, shows water cultures, illustrating the effect of minute quantities of certain poisonous substances on stimulating the growth of plants.

Plant propagation is illustrated by the admirable exhibit of cuttings, &c., sent from the Royal Botanic Gardens at Edinburgh.

Professor Armstrong shows the effect minute quantities of certain stimulants have on plants.

Mr. H. J. Veitch shows a long series of grafts of plants belonging to one genus on stocks belonging to another, probably a larger collection than has ever before been got together. Mr. Daniel also has an interesting series of pictures in connection with grafting; while Professor Winkler shows the

extremely interesting graft hybrids between *Solanum nigrum* and the Tomato.

Professor Blackman illustrates by means of apparatus many facts in vegetable physiology.

Mr. Cheeseman of East Burnham shows a large number of seedlings of trees grown in water indoors.

Of exhibits dealing with plant diseases caused by fungi, there are a large number. Mr. Massee's beautiful drawings are especially noteworthy.

Mr. Horne illustrates Potato diseases by means of living specimens; Dr. Pethybridge, by means of preserved specimens; and Mr. G. T. Malthouse, the dreaded black scab of Potatoes.

Mr. Brooks shows the fungi which produce Plum rust in all their stages, and cultivations and specimens of *Stereum purpureum*, the cause of silver-leaf. The last-named disease Professor Percival also shows.

Mr. Salmon illustrates a number of fungoid diseases of fruit trees by means of living and preserved specimens; and the Board of Agriculture has maps showing the distribution and spread of some of the fungoid diseases, which it aims at



CUP PRESENTED BY HIS MAJESTY THE KING FOR THE BEST EXHIBIT IN THE SHOW, AND WON BY LIEUTENANT-COLONEL SIR G. L. HOLFORD, K.C.V.O., C.I.E., WITH THE ORCHIDS ILLUSTRATED ON PAGE 262.

repressing by legislation, and also by the distribution of literature relating to fruit-growing throughout the country.

Professor Theobald's exhibit shows a variety of the most injurious pests of cultivated plants; and Dr. MacDougall's series of figures also illustrate the same point. The other side of the table is illustrated by Dr. Berger's most interesting series of fungi which attack and destroy scale insects themselves parasitic on Oranges and so on.

In plant-breeding the most interesting exhibits are those of Messrs. Sutton, comparing old-fashioned with new varieties of vegetables, and the various species of *Solanum*.

Professor Bateson and Professor Keeble show *Tropæolums* and Chinese *Primulas* respectively, illustrating the numerous variations obtained in the second generation from the cross. Mr. Hurst illustrates the same thing with crosses of *Berberis Darwinii* and *B. empetrifolia*; and Mr. Cuthbertson

exhibits a most interesting series of paintings of Sweet Peas to show the parentage of some of these popular plants.

WINNERS OF CUPS AND MEDALS.

His Majesty the King's Cup, for the most meritorious exhibit in the show, was won by Lieutenant-Colonel Sir George Holford, K.C.V.O., C.I.E., with Orchids.

Queen Alexandra's cup for the best rock garden was won by Messrs. R. Wallace and Co.

His Grace the Duke of Portland's Cup, for the best exhibit in the show, Orchids excluded, was won by Messrs. J. Veitch and Sons with stove plants.

Sir Jeremiah Colman's Cup, for the second-best exhibit in the show (winner of the president's prize excluded), was won by Mr. G. Mount with Roses.

Lady Colman's Cup, for Carnations (see Class 216), was won by C. F. Raphael, Esq.

Sir Trevor Lawrence's Cup, for herbaceous plants (see Class 237), was won by Messrs. G. and A. Clark, Limited.

Mr. J. Gurney Fowler's Cup, for fruit (see Classes 349 and 351), was won by the Duke of Westminster.

Mr. N. N. Sherwood's Cup, for Sweet Peas (see Class 310), was won by Mr. C. W. Breadmore.

Mr. A. E. Speer's Cup, for annuals and biennials (see Class 236), was won by Messrs. S. Smith and Co.

The Worshipful Company of Gardeners' Cup, for Roses (see Class 190), was won by Messrs. George Paul and Son.

Messrs. J. J. Grullemans and Sons' Cup, for Hippeastrums (see Class 41), was won by Lieutenant-Colonel Sir G. L. Holford, K.C.V.O., C.I.E.

Messrs. Sander and Sons' Cup, for Orchids (see Class 65), was won by Mr. F. Menteith Ogilvie.

Messrs. Charlesworth and Co.'s Cup, for Orchids (see Class 65), was won by Sir Jeremiah Colman, Bart.

Messrs. Bunyard and Co.'s Cup, for fruit (see Class 350), was won by His Majesty the King.

Messrs. Dobbie and Co.'s Cup, for Sweet Peas (see Class 311), was won by Sir Randolph Baker, Bart.

The King's Acre Nursery Company's, Limited, Cup, for Roses (see Class 204), was won by Mr. J. Brown, J.P.

Messrs. George Paul and Son's Cup, for Roses (see Class 197), was won by Mr. J. Brown, J.P.

Messrs. Sutton and Sons' Cup, for vegetables (see Classes 394, 395, 396 and 397), was won by the Hon. Vicary Gibbs.

The National Dahlia Society's gold and silver medals (see Class 314), were won by Messrs. Stredwick.

The National Chrysanthemum Society's gold and silver medals (see Class 189A) were won by Messrs. W. Wells and Co.

The Perpetual Flowering Carnation Society's gold medal (see Class 223) was won by Mr. Bertie E. Bell.

The National Sweet Pea Society's one gold medal and two silver medals (see Classes 310, 311 and 312) were won by Sir Randolph Baker, Bart., Mr. W. E. Alsen and Mr. L. H. Hatting respectively.

*** Owing to the pressure on our space, and the fact that they were not staged until as late as possible, we are compelled to hold over the report of the vegetable exhibits and sundries until next week.*

THE ROSE GARDEN.

EARLY ROSES.

THE high perfection attained by our florists in the forcing of Roses has practically brought summer-time into winter and spring. To see Roses offered for sale in the streets in April was unheard of some thirty years ago; but only recently (in April) I was offered splendid long-stemmed Mme. Abel Chatenay Roses at three a penny!

Although this glut of spring Roses is very remarkable, it does not debar one from admiring and appreciating the first-comers outdoors. How we welcome the first bud of the old pink Monthly or of Gloire de Dijon, telling us that the glorious Rose season will soon be here. I have no doubt but that this season will be quoted in the future as one of extraordinary earliness. Many Roses had buds of quite large size upon them the first week in May, and Conrad F. Meyer was in bloom in a garden close by on May 8, while in my own garden the beautiful snowy white Blanc Double de Coubert, Rosa Hugonis and the common Monthly were also in bloom.

Some Hybrid Perpetuals that made fine long growths last year, and which were left unpruned this spring, were also showing colour at that date. To obtain some early Roses I would commend this plan; Cut out the old wood in autumn and leave the new wood almost full length, merely stopping the plants in September by pinching out the points. In spring do not prune. Of course, one runs a risk of injury by frost, but in sheltered gardens such plants often escape. Rosa sinica will soon be out on walls, and in the open, running upon tree stumps, its lovely hybrid, sinica Anemone, has its buds well advanced. Buds of that unique Rose Juliet are already larger than marbles, and clusters of buds upon Grüss an Teplitz and Hermosa that were sparsely pruned will soon be enlivening our gardens with their charming sprays. The dear little Scotch Roses are fast advancing, and it is always a delight to have them with us, not omitting the beautiful Yellow Scotch or Williams' Yellow. R. altaica is a gem and one of the loveliest of early Roses;

so also is R. hispida, a pale yellow single, the buds of which before they unfold resemble a bijou Isabella Sprout.

The Rugosa Roses are among our most valuable garden varieties for early flowering. Blanc Double de Coubert (previously mentioned) is grand, and a beautiful crimson is Mrs. A. Waterer, which is as fragrant as brilliant. A fine big bush of Lambert's Carmen is now covered with buds. It is a single of a very glowing purplish crimson colour, and one well worth growing. I have not touched it with knife or secateurs; evidently the correct treatment to ensure a good blooming.

Other beautiful early Roses to look after are Blairii No. 2, Thalia, Euphrosyne, Polyantha grandiflora, Dawson Rose, Jersey Beauty and the pretty little De Meaux or miniature Provence, Mme. Plantier, a well-flowered bush being like a huge snowball. Then there are some of the better-class Roses that flower quite early, such as Climbing Mrs. Grant, Mme. Alfred Carrière and Reine Olga de Wurtemberg, all helping to make our gardens redolent with fragrance and beauty. Our forefathers knew nothing of the pleasures we have to-day, for most of these early Roses were unknown to them, and we have

also the ever-delightful wichuraiana Roses, nearly as beautiful with their glistening foliage as when in bloom, enabling us to clothe unsightly objects with their luxuriant foliage or to form picturesque features wherever desired.

ROSA XANTHINA FLOWERING EARLY.

This beautiful gem was in bloom with me on May 13, just about a week later than Rosa Hugonis. For beauty of the individual flower it is far in front of R. Hugonis. The petals are larger, the flower is of a more lovely cupped form and the colour deeper—quite a rich shade of Daffodil yellow, paling a little to the edges of the petals. The true R. xanthina is rather rare; why I know not, because it is quite hardy, growing out in the open among the Penzance Briars quite unprotected in the winter. It is termed the yellow Abyssinian Rose, being a native of that country, and was, and even is now, catalogued by some as R. Eca; but according to M. Crepin, R. xanthina is the name given to the species by Lindley in 1820, whereas R. Eca was adopted by Dr. Aitchison in 1880. Another synonym is that of R. platyacantha. M. Crepin says that R. xanthina is grown in a double form in China. One would like to see this double form. It would be interesting to hybridise these species with, say, R. sinica Anemone, and perhaps with the wichuraianas. Who knows what developments we might obtain! If even we could obtain more shades of yellow among the Scotch Roses it would be an immense gain to our gardens. I am trying R. Hugonis upon some of the Hybrid Teas, and I shall do so with R. xanthina. P.



CALCEOLARIA VEITCHII, A NEW GREENHOUSE HYBRID WITH MILK WHITE FLOWERS. RAISED BY MESSRS. ROBERT VEITCH AND SONS OF EXETER BY CROSSING C. ALBA WITH C. GOLDEN GLORY, AND SHOWN BY THEM AT THE INTERNATIONAL EXHIBITION.

Carmine Pillar and Waltham Bride will soon make an effective colour mass in the garden, and these will be augmented by the gorgeous Penzance Briars, which should be in every garden—one or two of the sorts at least—for their delicious fragrance following a shower is so refreshing. Una, one of the loveliest of the Hybrid Briars, is always a welcome early Rose, and the unique-coloured Austrian Copper gains admirers every season.

The beautiful rambler Aglaia, if left unpruned, will be presently like a big golden ball, and its more erect-growing rival, Electra, is seen well in a large bed edged with Ruby Queen pegged down.

The species by Lindley in 1820, whereas R. Eca was adopted by Dr. Aitchison in 1880. Another synonym is that of R. platyacantha. M. Crepin says that R. xanthina is grown in a double form in China. One would like to see this double form. It would be interesting to hybridise these species with, say, R. sinica Anemone, and perhaps with the wichuraianas. Who knows what developments we might obtain! If even we could obtain more shades of yellow among the Scotch Roses it would be an immense gain to our gardens. I am trying R. Hugonis upon some of the Hybrid Teas, and I shall do so with R. xanthina.

CLIMBING ROSE HIAWATHA.*(See Coloured Cover.)*

This beautiful climbing Rose, a spray of which forms the coloured cover for this issue, has proved one of the most popular of recent introductions. It was raised by Mr. M. H. Walsh and first put into commerce in 1905, since when it has found its way into nearly every garden where Roses are grown. It has a vigorous trailing habit, and is one of the best Roses for a pillar, arch, pergola, weeping standard or screen. Although the flowers are single, they last in good condition for a considerable time, and the plant is not usually badly attacked by insect or fungoid pests. It is now obtainable from any good Rose nurseryman.

SWEET PEA NOTES.

At the "International."—At the time of writing these notes it has not been my pleasure to see

to the hosts of visitors from various parts of the universe who will be present. I hope that those who contribute to the exhibition will reap a rich reward in business as well as the reward that magnificent flowers which one has grown always bring to their possessors.

Watering.—Plants out of doors had not the happiest of times in April, and those who postponed the planting until as late as they dared have not lost, as indeed they never do in our peculiar climate. Right through the month named no rain that was worth measuring fell, and in the Southern Counties at any rate, if not in all, recourse was made to the use of the water-pot much earlier than one likes to have to do it. Although there was generally enough moisture down below, it was too deep to be of substantial advantage, and the top became as dry as we usually expect to see it at the middle of July. We all acknowledge the inestimable value of deep cultivation and incessant surface-stirring;

Disbudding.—This process will now be directed towards the removal of blossom as well as growth buds, and will be carried out in degrees varying widely according to the principal object of culture. Those who aim at the production of the biggest blossoms exclusively for purposes of exhibition will be most severe, while those who desire to gather a few bushels of beautiful, though smaller, flowers on shorter stems will be proportionately moderate in suppression. Many judgments at exhibitions decree that the stems shall be long, say, anything over a couple of feet, and that each shall carry any number of blossoms beyond four; but the home decorator knows full well that stems about twelve inches or fourteen inches long, with three or four flowers artistically set, will make up the most delightful vase in skilful hands.

Syringing.—That evening heavy syringing or hosing—the latter is, as a rule, the better of the two—is advantageous after hot days, and in gardens where there is considerable dust, cannot be doubted for one moment, and the wonder is that it is not more frequently done by amateurs. Its primary benefit may be the invigoration of the plants after an exhausting day; but it has the further, and by no means unimportant, merit of keeping down attacks of green flies and other pests. These enemies of the Sweet Pea and its cultivator do not like applications of cold water coming through a hose or a powerful syringe, and it is not generally necessary to have recourse to other means to ensure their extirpation.

HORACE J. WRIGHT.

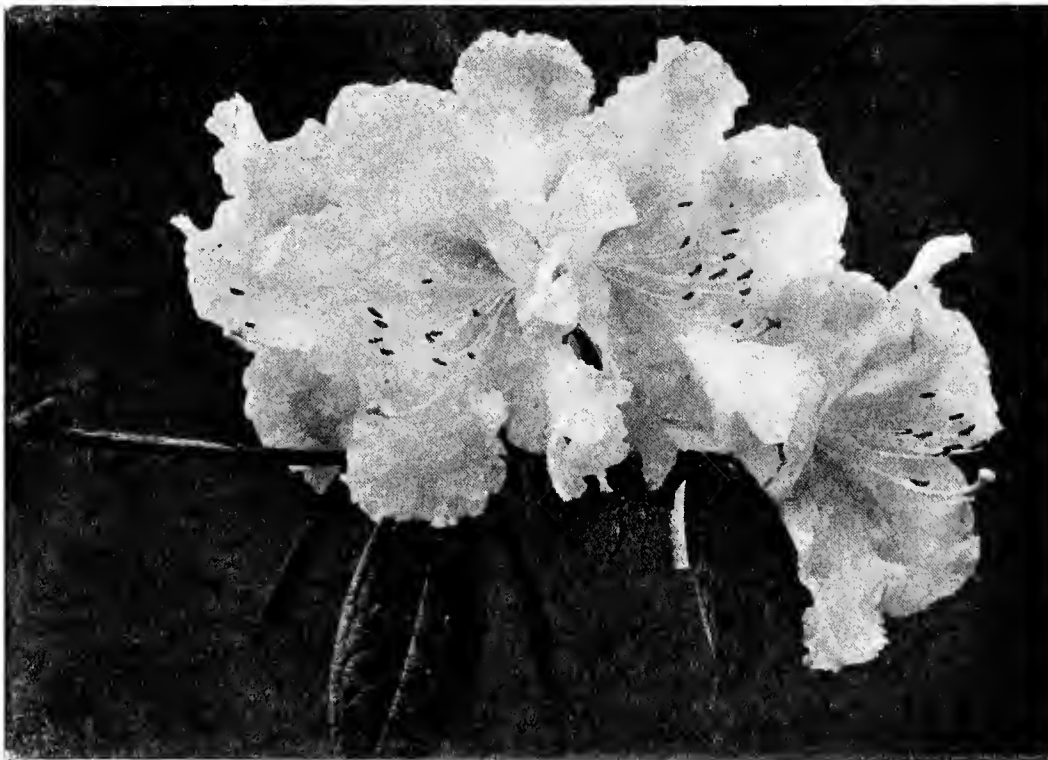
TREES AND SHRUBS.**RHODODENDRON FOSTERIANUM.**

AMONG the many beautiful Rhododendrons that require the protection of a cool greenhouse, this superb hybrid is certainly one of the very finest yet raised.

It is the result of crossing *R. vitichinnum* with *R. Edgeworthii*, two beautiful species in themselves. *R. fosterianum* possesses the good qualities of forming a shrub of robust habit, with a disposition to flower freely, while an individual flower measures from 6 inches to 7 inches in diameter,

which is larger than any other of its section. The loose heads are from three to five flowered, pure white, with a yellowish blotch at the base of the lobes. They are also deliciously fragrant, a single truss being sufficient to scent a large house. This tender race of Rhododendrons is excellent for planting in the borders of a cool conservatory, when during the spring months the plants afford a grand display of blossom, and even during the rest of the year their foliage is very ornamental. Specimens may also be successfully grown in large pots or tubs. They are among the easiest of plants to manage, provided they are planted in a well-drained, light, peaty soil which is free from lime, as Rhododendrons will not succeed where lime is present in the soil or water; therefore rain-water should be used for watering in preference to any other.

W. T.



A FLOWERING SPRAY OF RHODODENDRON FOSTERIANUM.

many Sweet Peas approaching to the flowering stage, but those that I have seen gave grand promise of beauties to come. We grumble, as Englishmen necessarily must do to keep them in a satisfactory state of health and happiness, that the date is far too early for the Queen of Annuals; but we know all the time that our Breadmores, Alsens, Dobbies and many others are more than equal to the task of maintaining their own splendid reputations and that of their country as well. When the issue of THE GARDEN containing these notes is published, there will be such a display of Sweet Peas in the grounds of the Royal Hospital, Chelsea, as has never been brought together at a similar season of the year in any part of the world, and I shall be much surprised if that section of the "International" does not prove to be one of the most attractive of all

but they were never more forcibly demonstrated than this year, and anyone who has been sceptical on the subject hitherto will have no semblance of a doubt in the future. In any event, it is absolutely imperative that the plants shall not be permitted to stop advancing now, or the results will be more or less disappointing to the grower, whether he desires blooms for exhibition or for home cutting. See, therefore, that the soil is maintained pleasantly moist, and that the top inch or two inches is always like so much dust. When water is required, cut a shallow grip along each side of the lines a few inches away and repeatedly fill with water until enough has been given for the moment; this is infinitely preferable to pouring hard, cold main-water directly on to the bases of the stems of the plants.

GARDENING FOR BEGINNERS.

THE DOUBLE FLOWERED ARABIS.

ARABIS, Wall Cress, or Rock Cress—call it which we may—is a plant that every amateur should grow, both on account of its beauty and usefulness and for the ease with which it may be grown. The double white variety is a great improvement on the single forms, for not only does it create a better effect, but it continues to flower over a much longer period than the single forms. I can imagine no finer sight in the rock garden than a large mass of the double form of *Arabis albida* known as Snowdrift, a well-named variety that flowers in great profusion, and which is the best of all companion plants to the *Alyssum* and *Aubrietia*.

In propagating the double varieties one has to have recourse to cuttings, and these are best taken in late May or early June after the flowering period has passed its best. Cuttings should be inserted in soil of a sandy nature in a partially-shaded border. The cuttings root quite easily, and in an incredibly short space of time every cutting will have made a tuft

of healthy green foliage. By the following spring one will be rewarded with good-sized flowering clumps. The double *Arabis* deserves to be more widely cultivated than it is. Not only is it so well adapted for clothing rockwork, as is seen in the above illustration, but it is also an admirable subject for spring bedding when associated with May-flowering Tulips and Forget-me-nots. Moreover, it might be used with advantage more freely for covering the ground



THE DOUBLE-FLOWERED ARABIS IN THE ROCK GARDEN.

between groups of tall-growing plants. As a carpet in a bed of standard Roses it looks very well, and even when not in flower its light green foliage is attractive.

BASKET PLANTS FOR GREENHOUSES.

A FEW baskets neatly filled with plants, both flowering and foliage, suspended from the roof of a greenhouse or conservatory give to the

structure a thoroughly finished appearance. If, however, the baskets are badly filled or allowed to become ragged in appearance, they will be an eyesore. Caked moss is sometimes used for lining the baskets, but I do not favour it. I have found from experience that such moss requires most careful treatment, and even then it dies. Of course, the crust keeps the soil from trickling through, but it does not look very attractive. The ordinary loose-growing moss is the best. It must be carefully picked over, all but the live portion being rejected. Suspend the basket in a shed at a convenient height; then commence at the bottom and pack a substantial layer of the moss against the wires, at the same time putting in the compost until the basket is three parts filled. At this stage the plants should be put in and the remaining soil placed around their roots. The moss must come flush with the top of the basket, but the soil should be nearly two inches lower to allow of the necessary watering from time to time, although watering by immersion is often desirable. If the moss is syringed regularly twice every day, it will not only retain its freshness, but grow also. It is a mistake to use a very fine soil in baskets. Fibrous loam with the finest portion sifted out and some half-rotted leaf-soil and a small quantity of well-rotted manure will form a very good and lasting compost.

Suitable Plants.—For the centre of the basket, Fuchsias, *Abutilons*, *Heliotrope*, *Lantanas* and Ivy-leaved *Pelargoniums* if the latter are trained to a stake or the wires of the basket. Ivy-leaved *Pelargonium Mme. Crousse* and blue *Lobelia* look well; so also do baskets of *Achimenes*, *Coleuses*, *Isolepis gracilis*, *Tradescantias* and *Panicum variegatum* are serviceable plants, the last-named two for growing out through the moss at the sides of the baskets. B.



A CUTTING OF ARABIS ON THE LEFT, WITH A PLANT, SIX MONTHS FROM THE CUTTING STAGE, ON THE RIGHT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Campanula pyramidalis.—Sow seeds now of this handsome and useful greenhouse plant for producing spikes next summer of both the blue and white varieties.

Canterbury Bells.—These make charming plants for the cool greenhouse to flower next spring, and may be sown in a pot or pan and afterwards pricked out and grown on, or young plants can be lifted and potted from the open ground in the autumn.

Calceolaria Clibranii.—For decorative purposes, both for the conservatory and indoors, this plant is admirably adapted, as the branching habit is most pleasing. The plant is easily raised from seed or cuttings, and if potted on as becomes necessary, make fine specimens.

Gloxinias.—While these are flowering, their season may be much prolonged by giving the plants a warm greenhouse temperature and drier conditions than those afforded during their season of growth, and stopping the use of stimulants.

Primula kewensis.—Seed may be sown now of this pretty and useful hybrid, or the plants increased by division. Throughout the summer months give the plants shade from sun and plenty of air, and as the pots fill with roots, manure-water, properly diluted, will be beneficial.

Fruits Under Glass.

Earliest Peaches and Nectarines.—As the trees of fruit ripen, increase the amount of ventilation and leave air on the top of the house at night. Discontinue syringing the trees, but damp down the paths and borders at least twice daily when the weather is bright. Great care should be exercised in gathering the fruits, as these are easily bruised. The fruits should never be squeezed to ascertain if they are ripe, but carefully lifted upwards, and if ready they will easily detach. If the trees are gone over daily, very few fruits will drop.

Early Cherries.—When the fruits have been gathered from the trees, whether pot or permanent, give the trees thorough syringings again, as oftentimes the absence of such while the fruits are ripening encourages red spider. If the trees are badly infested, the additional use of an insecticide will be found doubly beneficial. If the borders are dry, give a good soaking. Admit abundance of air.

The Shrubbery.

Lilacs.—A collection of these at this season is a grand addition to the shrubberies, and young plants well set with buds may be conveniently lifted and potted in the autumn for forcing under glass. A few of the best would include Charles N., single blue; Marie Legrave, large single white; Souvenir de L. Spath, a fine variety, large trusses of single dark red flowers; Alphonse Lavallée; President Loubet, early, rose purple, double-flowered, handsome truss; and Charles Joly, dark red.

Rubus deliciosus.—Unlike many of the species, this, whether grown as a bush or trained on a wall or pillar, is worth including. Commonly known as the Rocky Mountain Bramble, this shrub produces large white single flowers in great profusion.

The Kitchen Garden.

Tomatoes.—In the majority of places, and especially where the further protection of a wall or fence is afforded, it should be quite safe to plant out of doors after these lines appear in print. Oftentimes a low wall can be well utilised by training the plants in a sloping manner. Avoid the use of manures at the root, give a good watering in after planting, and apply a light mulch of strawy material.

Ridge Cucumbers.—These may be planted out towards the end of the month, after having first prepared a bed of long litter and leaves on which has been placed some fairly good soil made in the shape of a ridge and about a foot deep. Plant a yard apart, and keep the plants damped frequently in hot weather. Last season suited these well. In the event of a sunless summer, a cold frame will ensure a supply. King of the Ridge and Stockwood are both good varieties.

Runner Beans.—Where the sowing in pots as was recommended is not permissible, the seed may be sown in the trenches about the end of this month. Well prepare the latter and take out as much of the natural soil as possible, filling in with some well-decayed manure, covering with enough soil to leave a depression for watering. Sow the seeds in a double row and cover with 2 inches of the finest soil. The seeds will not need to be placed less than 6 inches apart. Place a ring of cinder-ashes round each, and, when germinated, dust occasionally in the early mornings with soot.

Parsley.—Keep the hoe going among this crop. Dust occasionally with fresh soot, which not only stimulates the growth of this plant, but imparts that dark green colour and prevents slugs attacking the plants.

The Flower Garden.

Summer Bedding.—The time has almost arrived when this will be in full swing. As quickly as possible remove the plants that have contributed to the spring display, saving any that are wanted for propagation. Well dig over the beds, first giving a dressing of decayed manure. Make a commencement with all the hardiest subjects, and where standards are employed, these can be planted and staked, the groundwork being planted afterwards. The more tender subjects, such as Mesembryanthemum, Ageratum, Begonias, Iresine, Alternanthera and Salvias, should be placed out last.

Dahlias.—These may be planted out when thoroughly hardened off, into well-prepared, heavily-manured ground. For the back of the herbaceous border, where space permits, these provide a display of flower when many things are past. For cutting in the autumn the Cactus and Pompon varieties are well suited. Only those varieties with strong supporting stalks should be grown for decorative purposes.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Gooseberries.—It is usually important to thin overloaded bushes, using the thinnings for tarts and jelly-making. Industry is the first that needs attention. A look-out for caterpillars must be kept.

Strawberries.—Delay no longer to place straw or litter between the rows of the main cropping and late varieties, in the first place thoroughly hoeing the ground and picking out weeds from among the plants. Young plantations need not be strawed, but runners as they push should be removed. This is quickly performed at this stage, requiring a much longer time if the runners are permitted to extend a few feet before cutting them off.

Hardy Shrubs.

Rosemary.—This succeeds on low walls, and now that the flowers are past it should be closely trimmed with a pair of hedge shears. A constant supply of young plants, either from seeds or cuttings, should be kept up to fill blanks, and these are best grown in pots so that they can be planted at any time.

Lilacs.—These are very early this year, and immediately the flowers are past, the bushes should be examined and pruned as required. Bought plants are usually worked on Privet, which throws suckers; but a stock on their own roots is easy to produce by striking cuttings of the young soft shoots at this time in an ordinary propagating-case.

The Vegetable Garden.

Salsify and Scorzonera.—In our light soil these roots run to flower if sown earlier. The first-named is seeded very thinly, and needs no thinning of the seedlings; the latter needs more space, and the plants should be a few inches apart.

Peas.—A large breadth of Autocrat, The Gladstone, or Sharpe's Queen should be sown at once in trenches if at all convenient. Should the soil be in the least inclined to dryness, thoroughly soak the ground after the trenches have been

prepared and cover the seeds with the unmoistened soil, which should be finely pulverised, to act as a mulch. It is a good plan to put supports to the rows at once, the plants growing so rapidly once they are above ground that it too often happens that staking is delayed, to the injury of the crop.

General Work.—The thinning of seedlings, e.g., Beet, Parsnips and Carrots, will require attention, and the application of surface-dressings of soot, pigeon and poultry manure and superphosphate made to these and other crops. Beans, Potatoes, Cabbages and Cauliflowers will need earth drawn to their stems and the soil loosened between the rows. Transplanted Onions also should have the soil deeply stirred between the rows, and, if needed, surface-dressed with a stimulating manure.

Plants Under Glass.

Cinerarias.—A few seeds may be sown to produce flowering plants in December. They germinate freely in a cool structure.

Primulas.—Old plants of *kewensis*, *verticillata*, *Forbesii* and *floribunda* may be divided into pieces of a suitable size, placed in small pots, and grown on meanwhile in cold frames. All succeed in a simple compost of loam, leaf-soil and enough coarse sand to ensure porosity.

Malmaison Carnations.—These must be afforded a thick shade in order to secure depth of colour in the blooms, which will shortly expand. Besides thinning the flower-buds it is profitable to reduce the number of young shoots to about half-a-dozen on each young plant, or on each stem of older plants, which results in stronger layers if they are wanted for increase or renewal of stock, and better growths if for bloom the succeeding year.

Begonia Gloire de Lorraine.—Cuttings were very late this year, but the young material should now be progressing rapidly. Much can be done to hasten growth by shifting the plants as they become ready, and not letting them stand unattended for a week or longer. A high temperature with much moisture also conduces to rapid growth. Vaporise occasionally as a protection against mite.

Palms.—The glass in the structure in which these are growing should be heavily obscured, and the atmosphere of the house kept very moist and warm. The plants themselves require much water at the root, and when well established in pots they enjoy a considerable amount of manure dissolved in the water, these conditions resulting in dark green foliage.

The Flower Garden.

Geraniums.—In most localities these still popular plants may be planted into the beds they are to adorn. If the soil is dry, moisten it the day previous to planting, the plants themselves being nicely moistened before starting operations. A slight sprinkling of superphosphate over the surface is beneficial, but it should be very slight. Geraniums are more floriferous if the ground is firm; therefore see that every plant has the soil made quite firm about it as planting proceeds.

Other Plants.—*Calceolaria amplexicaulis*, *Verbenas*, *Lobelia*, *Ageratums* and *Petunias* are other plants that may be gone on with, so arranging that those turned out of pots may be planted in the early part of the day, and those from boxes after 3 p.m., thus giving them several hours in the soil before the sun touches them. *Salvia fulgens*, *Begonias*, *Fuchsias* and *Heliotropes* are examples of plants that it would be unwise to plant out before June.

China Asters.—These, though small, are quite ready to transplant. Ours are lifted from the seed-bed in cold frames, the roots drawn through a mixture of soil and water and planted forthwith. A large number are set apart for filling gaps in late autumn, and are now dibbled into lines a foot apart each way. Some of the singles are invaluable for the latter purpose, both because of their intrinsic beauty and because they flower so late.

Biennials.—*Canterbury Bells*, *Wallflowers*, *Sweet Williams*, &c., sown six weeks ago should be transplanted while yet small, leaving slow-growing things like *Campanula pyramidalis* some time longer. The ground selected to grow them in should be very fertile in the upper 6 inches and in a nice friable condition. Once planted and watered, as a rule, an occasional hoeing is all they need afterwards.

R. P. BROTHERTON,
Tyningham, Preslonskirk, N.B.

THE KITCHEN GARDEN.

THE CULTURE OF LATE PEAS.

WITH light soils resting on gravel, for very late dishes I have found it best to sow what may be termed the dwarf earlies, sown in rows not far apart. No staking was done, but the bare soil between the rows in hot or dry weather was mulched with short manure. This was of great assistance in keeping the roots moist, otherwise the crops were a failure.

There need be no waste of land, as it is an easy matter to crop between the rows of Peas. At times the land is too heavy, and if this is so, the cultivator has a splendid opportunity to ameliorate and lighten it. Especially is this the case in most gardens of any size, as with considerable quantities of garden refuse burnt frequently and placed in heaps, this makes splendid material for adding to heavy soil, as it lightens and improves the texture. There are other aids, such as fine old mortar rubble, wood-ashes, broken chalk or lime used at the trenching. The work should be done when the land is fairly dry and not waterlogged. In such land spent manure from Mushroom-beds, old leaf-soil, or anything that lightens and improves, is beneficial.

No doubt the greatest difficulty exists when the soil is very shallow, resting on gravel, and the summer is hot and dry. In the preparation of the land I advise additions of heavy soil, but this in some instances is not always practicable, and other means must be adopted. I would advise growing all the late varieties, if of a medium height, or tall kinds in trenches—I mean varieties averaging from 3 feet to 6 feet—as the soil in the trenches can be made good by removal of the poorer material.

If the Peas are from 3 feet to 5 feet in height, the space should be at least that distance apart between the trenches. If taller, the space should be more, and a liberal amount of good manure worked in the soil at the bottom of the trench, placing over this the top spit or surface soil for sowing the seed.

Sowing.—This should be done carefully. In no case allow the seeds to touch each other. The taller the variety, give more room. Sow in broad-bottomed drills, not pointed. Last summer I noted that dwarf Peas of the Early Giant type allowed to lie on the soil gave a splendid return, as the haulm in a great measure protected the plants from drought, though, of course, there was a little more trouble in gathering the crop. I have not referred to dates for sowing or length of seasons, and these must be governed by the grower according to the time the crop is required and for how long. For instance, for September and early October, or, say, August and September, I should advise the late Marrowfat section, such as those of the Matchless Marrowfat type sown in May and June, and in well-prepared soil early in July. These will give a succession of crops from August to the end of October. In the North I have with very little difficulty had splendid crops till the end of November in a mild autumn. For certain soils I would advise sowing what are termed the first earlies—I mean soil of a poor nature on gravel or chalk—and to liberally manure. Of course, here the rows are much closer together, and due attention should be paid to shade and moisture. Given a good holding soil, there is no difficulty in growing the tallest varieties

for late supplies, such as Ne Plus Ultra, Selected, Gladstone, Late Queen, Alderman and others; but sow thinly and give ample room between the rows. In dry weather mulch between the rows with long litter or spent manure of any kind. This, well watered once or twice a week, will keep the roots healthy and do more good than overhead waterings of a light nature at irregular periods; and if it is impossible to mulch the surface soil all over, much assistance may be afforded by mulching each side of the rows and growing in deep drills or shallow trenches. G. WYTHES.

THE EDITOR'S TABLE.

Paulownia imperialis from Sussex.—Mr. P. Sutherland sends from Sussex flowering sprays of this beautiful tree. As stated in our issue for May 18, it has flowered in several places this year. Mr. Sutherland writes: "I am sending you flowers of *Paulownia imperialis*. The tree is about twenty years old and has just flowered here in Sussex for the first time."

Spring Flowers from Ireland.—The Rev. W. W. Fleming, Coolfin, Portlao, County Waterford, sends a beautiful collection of spring flowers. The Iris and Tritonia were particularly interesting. Mr. Fleming writes: "I am sending for the Editor's table some flowers from my garden. Tree Pæony, two varieties, five others I have being out of bloom, also two herbaceous Pæonies, old double crimson and another. *Viburnum plicatum*, not full size yet or pure white colour, but with that light lemon shade and pink suffusion noticeable before the flowers have attained their full size. Tulips Erguste, Isabella, Fairy Queen, Mr. F. Sanders and Margaret. The finest of the Darwins, Pride of Haarlem, is over. *Vitis Coignetie*, just to show the lovely bronze of the young leaf. *Fabiana imbricata* in full bloom. *Magnolia verbanensis*, nearly over, very like *soulangiana*, but, I think, better. *Rhododendrons* Doncaster and Pink Pearl, too well known to require a word of praise. *Tritonia crocata*, salmon shade. Iris *florentinus*, just beginning to bloom. Two blooms of *double Lily of the Valley*; I think an uncommon plant. Last, but I think not least, some blooms of *Azalea mollis*, of which I have a large bed with over ninety seedlings raised by myself, all in full bloom this year. Although there were many different shades, none of the colours seemed to fight or disagree with the others. There was perfect harmony and delightful contrast."

Rose Foliage from Dolgelly.—Mr. C. L. Cox, Tanllan, Dolgelly, sends some beautiful Rose foliage, and we have never seen better. This year the foliage of most trees and shrubs is particularly large and handsome, the result undoubtedly of the ripening effect of last summer and the copious rainfall of the last winter and early spring. Which Rose in cultivation possesses the largest leaf would be difficult to say, as much depends upon cultivation and pruning. Many of the Hybrid Perpetuals have immense leaves as one year old plants, but we know of none larger than those of the *Gloire de Chedane Guinoisseau* sent by our correspondent, although *Etienne Levet* and its sport, *Duke of Fife*, will yield very handsome foliage; so also will *Mme. Isaac Pereire*. Some of the Hybrid Teas are particularly superb in this way, *Dr. O'Donel Browne*, *Marquise de Sinety* and *Joseph Hill* being very remarkable, and we notice you say the first-named is very fine with you. Standard Roses when pruned fairly hard

will certainly yield the handsomest foliage, and, providing good growers are selected, a Rose is seen to great advantage grown in that form. One must not overlook the fact, however, that there is such a thing as having grand foliage at the expense of good bloom. Where nitrogenous manures are used in a too large proportion, foliage is always fine and abundant; but unless the phosphates are in proper proportion, bloom will be much inferior. We cannot agree with our correspondent's suggestion that yellow, mauve and white colours should not appear in the summer, for by so doing we should exclude numbers of the loveliest Roses, to say nothing of other flowers. There is something very soothing about yellow and white shades, but garish reds and scarlets upon a hot day are not pleasant to all. Colour-schemes may be all very well with perennial and annual plants, but we think Rose-lovers would miss much pleasure if they adopted it to any slavish extent. Mr. Cox writes as follows: "This year the foliage on my Roses is particularly large and plentiful. I enclose a few specimens for your inspection and an ordinary Rose leaf and Strawberry leaf for you to compare the sizes with. I should like to know which Rose in cultivation is supposed to have the largest leaves, if you can tell me. The Roses in my garden which at present have the finest foliage are the following: Mrs. Isabelle Milner, Mme. Jules Gravereaux, Lady Waterlow, Pharisæer, General Macarthur, Mrs. Ben Cant, Hugo Roiser, Melanie Soupert, Mine. Jules Grolez, Lady Ursula, Dr. O'Donel Browne, La France de '89, Souv. de S. A. Prince and Walter Speed, all of which are in splendid condition, with dense masses of leaves of beautiful colour and texture, and full of buds just breaking. Most of them are standards, the only form of Rose plant I really like. These I have on the edges of lawns, with *Violas* in a circle at the base of each tree. My climbing Roses are on old Apple trees roped together and Clematises of different shades planted with them, so that they all scramble up together. There is no more effective colouring than pink and blue in a garden, to my mind, unless it be yellow, mauve and white in the spring; but the latter colours should not come forward again in a garden until the autumn, I think, and white should at all times be avoided as much as possible."

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Cymbidium woodhamsianum Fowler's Variety.—A showy variety with amber-coloured petals and sepals. The lip is of a paler hue, tipped with chocolate. Parentage: *C. lowianum* × *C. eburneo-lowianum*. Shown by J. Gurney Fowler, Esq.

AWARDS OF MERIT.

Lælio-Cattleya Apollo.—A truly beautiful variety raised from *Cattleya Schröderæ* × *Lælio-Cattleya warnhamense*. The pale orange-coloured petals harmonise with the lovely mauve-tinted lip. Shown by C. J. Lucas, Esq.

Tropæolum albidiflorum.—A frail-growing climber or twiner having glaucous three to five parted leaves, the leaflets linear and half an inch or more in length. The flowers, which are pinky white, with orange yellow base, are nearly erect, open funnel-shaped and 1½ inches long. A pretty and distinct species. Exhibited by Miss Willmott, V.M.H., Warley Place, Essex.

Petunia Brown's Purple (Strain).—The award in this instance was given to the strain, the exhibited examples betraying slight variations of colour, which is of an intense royal purple. Should the variety come true from seed, or nearly so, it would prove of much value for window-boxes and the like. The flowers are single and of large size. Exhibited by Messrs. W. and J. Brown, Peterborough and Stamford.

Phyllocactus Coopermanni (P. Ackermannii major × P. Cooperi).—A variety of huge proportions and of bronzy scarlet colouring, the outer sepals shading to a dull brick red. It is a very handsome form.

Cereus amecænsis.—So far as we remember, no species of this genus has been honoured by an award for many years, a fact in measure due perhaps to the fugitive character of the flowers. That now shown had large and handsome flowers of spotless purity, which issue freely from the sharply-angled, erect-growing stems or branches of which this species is composed. These stem-growths as exhibited were several feet in length, some of the expanded flowers appearing low down, though several other almost fully-grown flower-buds appeared near the summit of the stem. These two excellent novelties were shown by Mr. A. Worsley, Isleworth.

The foregoing were shown before the Royal Horticultural Society at the meeting held on May 14.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

DELPHINIUM LEAVES INJURED (Churchill).—The Delphinium leaves have the appearance of having been injured by cold winds or frost. No fungus or insect is present to account for the blackening.

WALLFLOWERS FAILING (Enquirer).—The plants present the appearance of having been attacked by the fungus known as rot-mould, the simplest remedy for which is to lift and burn, soil and all, and avoid planting these and Stocks in the same ground for some time.

NARCISSUS DISEASED (A. E.).—There is a slight attack on the foliage of the Narcissus of the fungus Ramularia mallembricosa, and spraying with potassium permanganate will, no doubt, check the spread of this fungus. The main thing, however, that requires attention is the exhaustion of the soil, or, rather, the too close packing of the young bulbs which have formed since the plantation was made ten years ago. In dry seasons the supply of water is sure to be somewhat limited, and there are tremendous demands upon it when the bulbs are packed so tightly as these are in the present case. It is, therefore, likely that the leaves will suffer from want of water.

TREATMENT OF FLOWER-BED (H. D. R.).—The most profuse-flowering plants we know are Ivy-leaved Pelargoniums in pink and red shades; Ageratum, with a foot-wide border of white Violets; Heliotrope, similarly treated, or white, crimson, scarlet, pink and orange tuberous Begonias. Say, for example, you arranged a yard-wide centre of white Begonias, and set the remaining shades equally in triangular outline around. A simple and pretty bed would be one of Summer Cypress (Kochia) in the centre, pink Ivy-leaved Pelargoniums around, save for a foot-wide margin, to be finally planted with white Violets. In this arrangement the Pelargoniums would first require to be

pegged down to cover the soil, subsequently allowing the plants freedom of growth and flowering. The Heliotrope alone makes a fine bed, and the flowering is continuous, and where fragrance is cherished it is one of the best. The thing to avoid is too many plants of undecided colours.

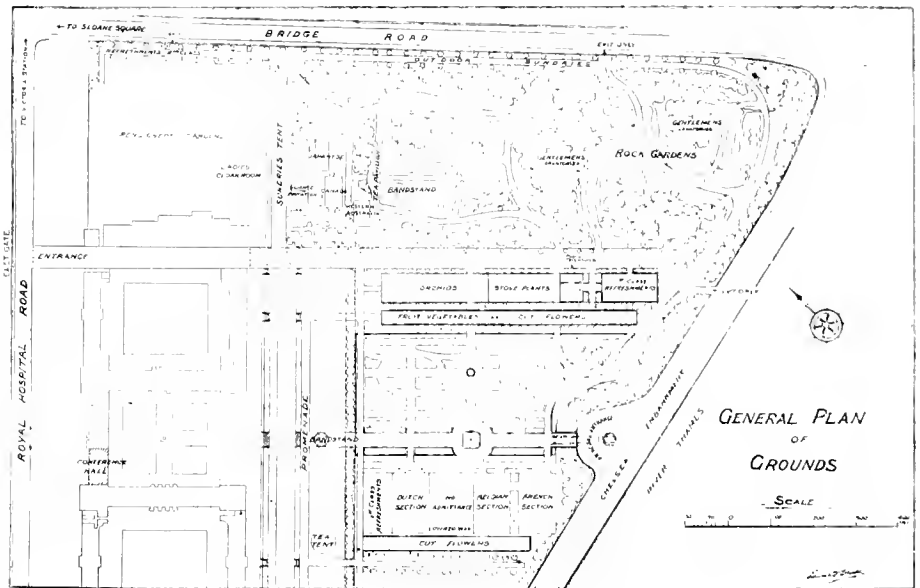
TULIPS DISEASED (Denbury).—The Tulips are attacked by the well-known Tulip fungus Sclerotinia parasitica. The spores of this appear to attack plants most easily when the latter have been weakened by frost. No cure is known, but the fungus forms black, hard masses, called sclerotia, by which it passes over the winter. It would be well to remove all the decaying leaves as soon and as completely as possible, dig up the bulbs and clean them thoroughly of earth, and search for these little black resting bodies, which vary from the size of a pin's head to that of a Pea, if it is desired to plant them again this season. A new site should be chosen.

SERIES OF PLANTS FOR TUBS (M. D.).—After your Rhododendron is past you may for a time depend upon tender subjects, such as flowering Cannas, Fuchsias and the common Hydrangea. Then in August a succession can be kept up by the creamy white flowered Ilydrangea paniculata grandiflora and the lavender blue Perowskia atripliciflora. After these come the blue-flowered Ceanothus Gloire de Plantières and the pink-flowered Ceanothus Marie Simon. These, with the purple Veronica speciosa, will last well towards the end of September, to be followed by Desmodium penduliflorum, a pretty Pea-flowered shrub with purple blossoms. After this is over we can recommend a berried Aucuba, which will last until the Laurustinus and Winter Jasmine come in. This Jasmine, though usually grown as a climber, may also be treated as a loose bush. Besides the above-named shrubs, some herbaceous

reclothe the branches, whereas now a considerable amount of new wood has already been made. Clip it back as hard as possible, so that the main branches are kept close to the wall.

PROPAGATING HARDY HEATH (B. L.).—We are afraid that you will not be able to purchase seeds of Erica Veitchii. Why not propagate it from cuttings? Very satisfactory results may be obtained by taking cuttings in July and August and inserting them in pots of sandy peat made very firm. Insert the cuttings firmly and stand in a close and slightly warm frame, or case, until rooted. If a bell-glass is placed over each pot of cuttings in the case, roots will be formed more quickly than if the cuttings are allowed a greater amount of air. Keep the young plants in a cold frame or sheltered border in April. Seeds of conifers may be obtained from Messrs. Dicksons, Limited, Chester; Messrs. Little and Ballantyne, Carlisle; and Messrs. Wiseman, Forbes, N.B.

TIMES FOR TAKING CUTTINGS (E. P. K.).—Cuttings of Forsythia may be inserted at once in a cold frame or a slight hot-bed. Cuttings of Rambler Roses, Hybrid Tea Roses, Ceanothus and Cotoneaster should be taken during July and August, and be inserted in pots of sandy soil in a close and slightly warm frame. Cistus cuttings may be taken at the same time, and either be placed in gentle heat or in a cold frame. Under either condition, however, they must not be allowed to become very wet. Brooms, as a whole, are better increased by means of seeds than by cuttings. Cuttings taken during July and August, however, can be noted in a cold frame. Staphylea and Cotoneaster cuttings may be rooted in gentle heat during July and August. Cuttings of Aubrietia, Alyssum and Pinks ought to be inserted at once, either in a cool shaded



GROUND PLAN OF THE ROYAL INTERNATIONAL EXHIBITION.

subjects may be grown, as Michaelmas Daisies do well in this way, and are especially valuable in the autumn, while last season we saw a pot specimen of the warm terra-cotta-coloured Heleium Riverton Gem, which flowered throughout the month of August and well on into September.

DISEASE AMONG ANEMONES (N. G. H.).—The fungus attacking the Anemones has hitherto been known in this country as *Æcidium punctatum*, and now as a form of the Plum rust, *Puccinia pruni*. So far as we are aware, it is likely to attack any form of Anemone coronaria. The spores formed on the Plum leaves (teliospores) in late summer, and falling to the ground with them in autumn, are the source of infection of the Anemone in the spring. It differs from *Æcidium leucosporum*, which occurs on the Wood Anemone, and the alternate host of the other, if it has one, is not known. If the Anemones are so poor, it would be well to destroy them. Probably spraying in spring with a rose red solution of potassium permanganate, or with ammoniacal copper carbonate, would check the attack on the Anemone, while affected Plums may with advantage be sprayed with Bordeaux mixture.

TREES AND SHRUBS.

PRUNING HOLIES (E. P. K.).—Hollies may be pruned any time between the present and the end of August; the earlier the better, however. Do not clip them in a formal manner, but reduce the overgrown parts by drawing some of the longer shoots out. These remarks do not, of course, apply to hedges and formally-grown trees. It is usually as well to keep the lower branches free from the ground. Ivy should be clipped at once; in fact, it is already a little late. April is a good month, for it may then be clipped severely, and new leaves will appear almost at once to

border out of doors, or, better still, in a cold frame. Rosemary and Lavender cuttings may be inserted in a cold frame during August, or earlier if you like. Pansies may be rooted any time between the present and September, either in a bed out of doors or in a cold frame. Winter Sweet is very difficult to root from cuttings, and you would do better to layer some of the lower branches at once. Almond trees are usually grafted or budded upon Plum stocks. You will not do much good with them from cuttings. Some of the subjects mentioned above may be rooted in an open border, but the results are usually less satisfactory than when a frame is used.

ROSE GARDEN.

DESTROYING RED RUST ON ROSES (A. M. G.).—Red rust, or orange fungus, can more readily be prevented another season if all leaves that are attacked be gathered up in autumn and burned. If this were thoroughly done, no infection would take place the following season. It is well to spray the bushes as soon as the foliage appears in the spring with sulphide of potassium, 1 ounce to two gallons of water, and as the foliage strengthens a stronger dose may be used. As your Scotch Briars are by this time well developed, you can safely use the stronger solution. This is best applied with a sprayer, one known as the "Alpha" being an excellent article. If Rose-growers would use a sprayer early enough and continue spraying throughout the early stages of growth, far less trouble from insect and fungoid pests would be experienced; but it is almost hopeless to attempt a cure when the attack has been allowed to gain the ascendancy. To trap field-mice we have found narrow-necked pickle jars half filled with water and sunk in the ground up to their rims to be very good. There are also some excellent poisons on the market for destroying mice and moles, for which we would refer you to our advertising columns.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

A Correction.—In our issue for last week the names of two of the directors of the Royal International Horticultural Exhibition, on page 254, were placed under the wrong portraits, due to the transposition of the blocks. These were Mr. A. C. Jackman and Mr. Hubert J. Greenwood, J.P.

Cornus florida rubra.—This is a handsome free-flowering Dogwood with creamy white flowers surrounded by red bracts, which makes it very interesting. In the autumn they turn a deep crimson and last a considerable time on the tree. *Cornus Nuttallii* has been grand this season.

The Labrador Tea (*Ledum latifolium*) is a very pretty plant and in cool spots will bloom profusely. It grows from 2 feet to 3 feet in height. The flowers are white and produced in terminal corymbs. It is a perfectly hardy, neat-growing shrub and an old one, but is seldom seen now. It succeeds best in cool, peaty soil.

Enkianthus campanulatus.—This is a rare deciduous Japanese shrub, growing about three feet to four feet. When it is in flower it is very beautiful, as it bears clusters of dark red, waxy, bell-shaped flowers, and in the autumn the small foliage turns a beautiful red. This is an excellent plant for choice positions and as dot plants in the alpine shrubbery. *Enkianthus japonica* bears white flowers with scarlet foliage in the autumn.

A State Diploma for Horticulture.—An important statement was made by Mr. Walter Runciman, M.P., in his speech at the jury's luncheon at the Royal International Horticultural Exhibition. The Minister for Agriculture advocated (and practically promised) a State diploma for horticulture in this country, a hint that was heartily approved. The necessity for such a diploma has long been felt, and never more so than at the present time.

The Snowdrop Tree (*Halesia tetraptera*).—This has been in perfect bloom, and is a tree that cannot fail to bring forth admiration. The flowers are snow white, drooping on the under side and all along the young branches. There are several trees at Leonardslee that have huge heads about twenty feet high, and each season at pruning-time all the vertical growths are taken off so that the flowers are in character with the drooping foliage. It is a native of the river banks of North Carolina. Any soil seems suitable for its cultivation.

Coroeka Cotoneaster.—This is a very curious New Zealand plant, sometimes called a dwarf, but plants 6 feet to 8 feet in height and still growing are not uncommon. The branches zigzag and

entangle in a very attractive manner. The leaves are small and white on the under side. The flowers are yellow and like little stars, and are produced very freely; in fact, it proves one of the most striking plants in the garden just now. It is quite hardy, though it is often supposed to be a tender subject. *Coroeka buddleoides* is quite a tender plant and must not be confused with the above; it is not half so attractive either, though it is often sent out as *Cotoneaster*, but the plants are widely distinct.

The Cricket-bat Willow.—Remarkably high prices are obtained for the special forms of *Salix* whose timbers are most prized by cricket-bat-makers. There is no doubt, says a writer in the current issue of the *Kew Bulletin*, that the timber of rapidly-grown trees is better for the bat-makers' purpose and of greater value per cubic foot than that of slowly-grown, comparatively stunted trees, which is contrary to what obtains with timbers in general. The best bat-makers' timber is that in which the annual rings are not less than half an inch wide. Trees on poor or comparatively dry ground will bring in neither so quick nor so large a return per cubic foot of timber as those grown on better, moister soils. This is a matter that should receive attention when a site is selected.

Hippeastrums at Glasgow.—There is a capital collection of *Hippeastrums* in the Botanic Gardens, Glasgow, where, from a good number of varieties of the best modern type, a great number of seedlings have been raised and the best carefully selected. They are well cultivated here, and are highly appreciated when in bloom by the many visitors to these Botanic Gardens, which, by the way, are maintained by the Corporation of Glasgow, and are well managed by Mr. James Whitton, the superintendent of parks, who is also curator of the Botanic Gardens. Mr. Rorke, an old Kewite, looks well after the plants in the houses, and he and his staff deserve much credit for the *Hippeastrums*. All the best colours are represented, and the groups are much admired.

Dendromecon rigidum.—For sheltered positions this somewhat rare shrubby plant is strongly recommended. Its yellow Poppy-like flowers are freely produced when it becomes established, and after being once planted it should not be removed, for it resents any disturbance at the base. The soil should be of a loamy nature, rather light and rich, while during a dry summer the roots may be mulched with partly-rotten manure. Propagation is effected by means of cuttings from shoots that are not too sappy. Each cutting should be placed singly in a small pot and kept in a frame till rooted. It is a difficult subject to increase, which probably partly accounts for its being rarely seen.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Darwin Tulip Clara Butt.—I saw a nice lot of this fine Tulip in a large garden the other day. There it is still highly prized as perhaps the most beautiful of its colour—a soft delicate rose with a slight blush tint on the outer segments. It well deserved the honour of being figured in the coloured plate of THE GARDEN for April 15, 1905, and the first-class certificate of the Royal Horticultural Society a few weeks later. It is not only delightful in its colour, but is most shapely in form; and in beds or lines, as well as in groups, it is not easily surpassed by any of this most useful class of Tulips.—S. A.

A Pretty New Fuchsia.—The new Fuchsia Benita, which is referred to in a leading note on page 237 of THE GARDEN for May 18, is indeed a charming one, and I can fully bear out all that is advanced in its favour. I saw a number of plants of this staged at a show, and took notes of it at the time. I also feel sure that it will receive an award in due course, as it is of so much more worth than some varieties already honoured. Judging from the general appearance of the plants, they will prove useful in pots and baskets, as well as planted out. The gardening public should see more of this charming Fuchsia.—G. G.

A Champion Sweet Pea.—One commonly hears enquiries for the most vigorous-growing Sweet Peas. Last year in Messrs. Dobbie and Co.'s seed farms at Marks Tey, Mr. Andrew Ireland noted a plant of Mrs. Cuthbertson the flower-stems of which each carried five blooms. The seeds were specially saved and sown. Among the progeny there is, or was on May 11 of this year, one plant carrying stems bearing respectively four, five, six, seven, eight and nine blooms. Seeds saved from this champion should next year give plants bearing anything up to eighteen blooms on a stem. Will this be the case? Messrs. Dobbie and Co. will doubtless be able to supply the wherewithal—seeds—to make the test.—H. J. W.

Wistaria sinensis.—The beautiful and fragrant flowers of the Wistaria are this season exceptionally fine. Here we have a very old specimen that occupies a warm position sheltered from the north-east winds, and at the present time it is a very pleasing sight, the blooms all over the tree being fully expanded. Last year the bunches of flower-buds were greatly injured, and only at intervals where the trusses were snug to the wall did the flowers open at all satisfactorily. The propagation of this Wistaria is not at all difficult, and anyone wishing to raise a few plants from any particular specimen can quickly do so by layering the young growing shoots, as almost every bud will form a plant.—H. MARKHAM, *Wrotham Park Gardens, Barnet.*

Phlox amœna.—Having recently seen a good mass of this charming little flower, I was reminded that it is not always easy to grow with success. I am writing of what I find the best treatment. The position of this class of Phlox means a good deal, and the general advice given is that all the alpine species require a sunny position. This recommendation holds good for such as *P. divaricata*, *P. stellaria* and *P. subulata*, which seem to revel in the sunniest position in the rock garden. With

P. amœna I have found that the brightest sun is not so good, but a slope to the north or north-west is much more suitable. In this position the plants make strong growths, which do not get burnt up as they do on the southern slope, and the plant is apparently much more at home in the partial shade, provided it is also out of any dampness during the winter months.—A. T. C.

Shrubs Under Trees.—In front of our County Hall at Kingston is a group of tall old Elms that many years ago were beheaded, and now have heads of dense growth, so that all beneath is literally shrouded. But, worse still, the soil is a mass of Elm roots; hence it is a matter for wonder how any shrubs can possibly exist planted close to the trees. It is just now most interesting to note in such a hungry, shaded position a handsome specimen of *Cytisus scoparius andreanus* quite a mass of flower, also full of good foliage. Evidently this is a Broom which in such root-eaten soil may be largely planted. Close by Box does well, also *Berberis stenophylla* (quite a nice dense, robust plant) and *Berberis Aquifolium*. How these shrubs managed to exist as they did through the intense drought of last summer, and now are in really luxuriant growth, presents a problem. Evidently they like the root dryness of the position. The Elms are within 4 feet to 5 feet of the shrubs below; hence it is seen that the root area must be a mass of fibres.—A. D.

Exhibition versus Private Garden Flowers.—In reply to "B.'s" criticism of my note, I think he has not quite understood it. I did not intend to decry professional florists' exhibits, which are usually most interesting, but only the general tendency to show flowers which mislead and grievously disappoint the unwary amateur. The herbaceous flowers staged at exhibitions do "suggest cut-and-come-again," and all too frequently fail to carry out that promise or have some fault that unfits them for small gardens, and so they delude and disappoint the ignorant amateur. Take, for example, Sweet Peas; the shows do not tell us that several of the "show" flowers require to be shaded to preserve their colour, and who of us wants to make our little gardens look like a laundry drying-ground? The Rev. J. Jacob shows an uncanny gift of reading between the lines, and sees that the poor amateurs want "someone who knows the way" of the Daffodils and other flowers to tell us which are likely to thrive in our gardens. I wish he would help us to a good, late, deep yellow trumpet for the garden. We have plenty of pale Narcissi at a poor man's price, but I fail to find a flower of a deep yellow akin to *N. bicolor grandis*, which is a joy to me with its happy, healthy flowers and foliage.—AN AMATEUR.

Hyacinths and Abutilons.—On page 238 of THE GARDEN, issue May 18, "C. T." refers to my notes on Abutilons under the above heading, and asks whether I have tried any of these plants in the flower-beds. My reply is Yes; I have grown them as dot plants in many large beds, and associated with other kinds of plants in sub-tropical bedding schemes. My article in THE GARDEN of May 4 dealt with the usefulness of the plant under glass. In North Lancashire and in Hampshire I have grown the Abutilon in the flower-beds, with very satisfactory results. The chief point is the due hardening of the plants before they are put out, so as to avoid the loss of basal leaves. In

the London and other parks Abutilons are often very extensively employed in the bedding-out schemes. I have seen them so grown, with charming effect, in Hyde Park. The variegated forms are the most useful for such work.—AVON.

—As stated by your correspondent "C. T." page 238, the employment of Abutilons for decorative purposes need not be limited to the indoor garden, as in the open ground they may be advantageously treated in various ways. Now that heds of mixed subjects (some of them in the shape of good-sized plants) are so popular for summer bedding, the Abutilons are of great service, and in some gardens are freely used in this way. Of variegated kinds, Abutilon Thomsonii, of upright growth, the lobed leaves of which are freely mottled with yellow, is especially effective as a dot plant, while another frequently met with is the rambling-growing *A. vexillarium variegatum*, which has small deep green leaves freely marked with gold, and red and yellow blossoms. This is often grown as a standard, under which conditions the semi-pendulous shoots show themselves to advantage. Souvenir du Bonn has large lobed leaves margined with white, while Sawitzii is a good deal in the same way, but less vigorous in growth and with a much greater amount of white in the leaf. The flowering varieties mentioned by your correspondent "Avon" all do well out of doors during the summer. One purpose, however, not referred to by either of the previous writers, and for which I consider some of the Abutilons particularly adapted, is for clothing the roof or rafters of a greenhouse. In this way the blossoms, owing to their strictly pendulous nature, are seen to very great advantage, while, what is also of considerable importance, they are produced throughout the greater part of the year.—H. P.

The Streptocarpus in South America.—Having read the interesting article on the cultivation of Streptocarpus in THE GARDEN for February 24, I thought perhaps you might be interested in a photograph of a group of these plants, taken about the middle of February (Midsummer). They are undoubtedly among the finest greenhouse flowering plants one could wish to grow. Here we have a small house holding over a hundred plants of Streptocarpus, intermixed with the same number of Asparagus plumosus, the first-named in 4-inch to 8-inch pots, and the latter in 3-inch pots. The effect is charming. The colours range from white tinged with blue and purple, lavender, and blues down to deep purple, also a few plants of a distinct rose tint. At the present moment the strain known as Cirrus is in full bloom. More delicate-shaped flowers one could not wish to see. They resemble a Cattleya more than any other flower I have seen. The size of these flowers ranges from 2½ inches to 3½ inches across. The cultivation of these plants is carried out on the same lines as those of your correspondent, with one exception, and that is the damping overhead. During the hot summer months (when the glass is at 90° in the greenhouse and falls to 85° in the afternoon) we have always damped the foliage in the afternoon, and so far have had no bad results from such treatment. If plant-lovers in the Colonies or any foreign country could be induced to send you short articles on plant species and their cultivation, it would be a great help to the public at large.—A. O. LOREN, *Quinta de Browning, Roldán, F. C. A., Argentine Republic, South America.*

Coronilla glauca Flowering Outdoors.—I am interested in the notes about *Coronilla glauca* which have appeared in THE GARDEN within the last few weeks, and I enclose a photograph of a specimen of it growing in the garden here, and which, at the time it was photographed about three weeks ago, and for a considerable time previous to it, was a complete mass of flower. It is growing at the end of a plant-house, and, consequently, protected by it, and measures 9 feet across and about four feet in height. Of course, the winters here are not so severe as on the mainland, as large trees of *Magnolia grandiflora* grow well in the open, as may be seen in the photograph, and Myrtles, which usually need the shelter of a wall, grow here unprotected.—A. E. P., *Ryde, Isle of Wight*. [Unfortunately, the photograph was not suitable for reproduction.—Ed.]

Exhibiting Daffodils.—I am much interested in the discussion on the above subject, and particularly so in several points in Mr. W. A. Watts' letter, page 226, issue May 11. With regard to the artistic arrangement of the cut flowers in competitive classes, I affirm it is of very secondary importance. A judge wishes to be able to see the points of every bloom at a glance, and is annoyed with anything that obstructs that clear view. If neatly arranged, both flowers in pots and cut in vases are artistic enough, and their value for garden decoration and market purposes can easily be appraised by the public. I, too, dislike the paper collars and any faking of the blooms. I once saw an exhibitor, just before the judges came round, deliberately tear away the fringes (faded) of a number of trumpets, and the judges, one a noted enthusiast, awarded the first prize to the collection including the faked flowers over others fresher and more meritorious.—B.

The Snowball Tree in Ireland.—I send two of the largest blooms of Guelder Rose (*Viburnum Opulus*) I have ever seen. They were grown in the garden of one of my parishioners. I have taken very accurate measurements of both of these blooms. One measures in circumference $15\frac{1}{2}$ inches, the other 16 inches. They were grown on a tree about fifteen feet in height. These gigantic blooms were both at the extremities of high branches. A very large number of flowers were in bloom, but the two I send dwarfed all the rest. I was given a bloom of *V. macrocephalum* this year. I was anxious to see it, as my plant did not flower. This species is said to be the largest flowered of all the *Viburnums*, but the flower kindly sent me was a pigmy beside the two Goliaths I send. The Snowball Tree is one of our best and most beautiful shrubs, as hardy as an Oak and as free-flowering as Whitethorn. It ought to have a place in a collection of flowering shrubs, no matter how small the collection may be. It is a thing of beauty and a joy for ever.—(Rev.) WILLIAM W. FLEMING, *Coolfin, Portlaw, County Waterford*.

FORTHCOMING EVENTS.

June 4.—Royal Horticultural Society's Meeting and Exhibition of Rock Plants. Masters' Memorial Lecture at 3 p.m. by Professor Bayley Balfour, F.R.S., V.M.H., on "Problems of Propagation." Scottish Horticultural Association's Meeting.

June 6.—Linnean Society's Meeting. Burnley Horticultural Society's Meeting.

June 8.—Stirling Horticultural Association's Meeting.

THE ROSE GARDEN.

DECORATIVE ROSES FOR THE HEARTH.

AN arrangement of Roses in the fireplace during the summer months is greatly appreciated, and much improves the general appearance of a room. The decoration rests on the style of fireplace; but whether an Adam, Georgian or old-fashioned ingle-nook, Roses can be arranged to suit all, and when the



CHERRY TREES IN POTS SHOWN AT THE INTERNATIONAL EXHIBITION BY LEOPOLD ROTHSCHILD, ESQ. (GARDENER, MR. J. HUDSON, V.M.H.)

grate is not attractive, a pretty fire-screen can be utilised. A screen, if used, should have a mirror; it will reflect a portion of the flowers and give an added coolness to the arrangement. Place the screen in the centre of the fireplace, and arrange vases of various height on each side and in front, filling them with water.

Next cut the blooms and foliage required, and set to work at once, taking care to nip a little off the stem of each before placing it in a vase; they last much longer when this is done, and one cannot expect the best results if the blooms are lying

about for an hour without water. If the fireplace is a large one, taller vases must be used and a big bowl placed in the grate. Where possible, the flowers can be arranged from the left side of the fender to the mantel-piece, finishing up the side of the mirror with a long flowering spray of one of the *wichuraiana* Roses, which will be prettily reflected again in the room.

The colour of the room must also be considered. Take care that the Roses used blend or contrast; a glare must be avoided. In rooms where blue, green or lighter colours predominate, Dorothy Perkins and Crimson Rambler are quite at home; but do not use them when the tone is red. Always bear in mind that the key to a successfully-arranged hearth is lightness.

One of the first Roses available after fires are dispensed with is *Una*. Cut long sprays with buds and open blooms, and arrange lightly with foliage of the *wichuraiana* Rose *Jersey Beauty*. *Juliet*, with foliage of *Alberic Barbier*, and *Beauté de Lyon*, with foliage of *Jersey Beauty*, are two of the early Roses especially noticeable because of their unique colour, and are really very elegant when nicely set up.

Electra, *Tea Rambler*, *Queen Alexandra*, *Blush Rambler* and *Alexandre Girault* come next, the latter being early and one of the finest of the *wichuraiana*s. When the foliage of the variety used is not decorative, add sprays of one of the *wichuraiana* Roses, *Irish Elegance* and *Lyon Rose*, with foliage of *Alberic Barbier* and long sprays of *rubrifolia*, once seen will never be forgotten. An arrangement of tawny yellow Roses of all shades was greatly admired; they were *Melanie Soupert*, *Marquise de Sinety*, *Lady Hillingdon*, *Mme. Ravary*, *Duchess of Wellington*, *Harry Kirk*, *Mrs. Aaron Ward*, *Arthur R. Goodwin* and *Miss Alice de Rothschild*, with long flowering sprays of *Shower of Gold*. This arrangement is greatly improved if a few blooms of the famous new *Rayon d'Or* can be found for the mantel-piece. Then we have *Dorothy Perkins*, *White Dorothy*, *Excelsa*, *Hiawatha* and several others of this tribe. All of them can be cut long, and last well in water.

When the ramblers are over, an arrangement of pink blooms is very attractive. *Lady Ashtown*, *Caroline Testout*, or any good pink, with a few blooms of the single *Rose Dawn* and sprays of *Alberic Barbier* and *rubrifolia*, *Mme. Abel Chatenay* buds and open blooms, with trailing *wichuraiana* foliage, are really charming. An arrangement of dark Roses, with *Hugh Dickson*, *Edward Mawley* or *W. E. Lippiatt* and the deep velvety crimson single *Rose Maharajah*, *wichuraiana* foliage and long sprays of *sericea Pteracantha*, is another success, the handsome red thorns of the latter showing up daintily among the shining leaves. E. E. F.

FEEDING POT ROSES.

THERE can be little doubt that Roses enjoy an extended rootrun, so they need considerable help when confined to the limits of a pot. In addition to a rich compost, they can be assisted by liquid manures. In fact, the judicious application of these is a great feature in their successful cultivation, and deserves a few words.

In the first place, I do not know of many subjects more easily suited as regards manure than Roses; but, like most others, they have some special favourites. Then we must perforce consider whether they are being grown for profit alone or for the adornment of the greenhouse and conservatory. It would be quite out of the question to use such manures and in the same way among

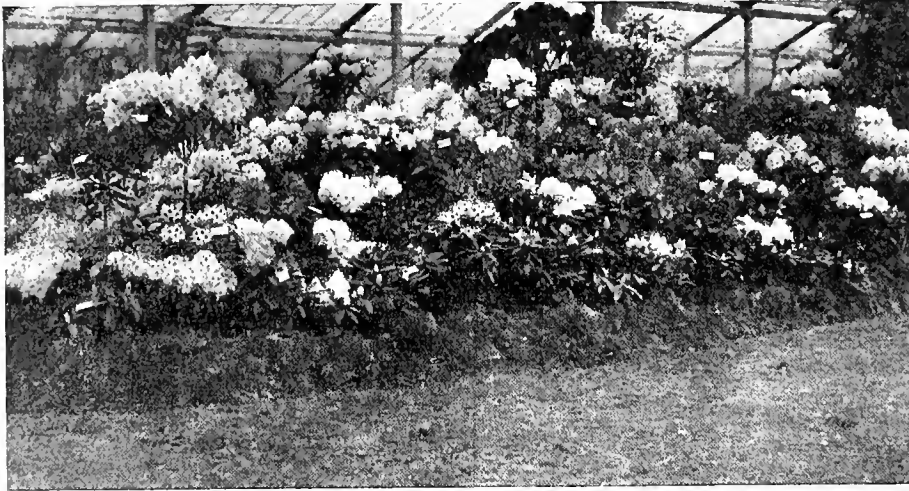
the latter as is often practised with market Roses, where we can mulch heavily among the pots and use more crude manures upon the surface of the pots than could possibly be the case in a private establishment. Personally, I have little doubt but that the Rose foliage feeds very considerably upon the ammonia arising from the manures. It gives more substance or texture to the leaves, and appears to keep the whole in better health and vigour, always provided it is not over-strong and the house is kept closed. I fancy, too, that insects have less effect; certainly we do not find red spider.

But my chief aim is to make a few comments upon the feeding of pot Roses as cultivated in private gardens, and, of course, we cannot employ

manures for pot Roses. The soot must be put into rather a fine bag, or there is apt to be a most objectionable scum on the top. A. P.

VEGETABLES AT THE INTERNATIONAL SHOW.

THE premier position for vegetables, in the opinion of those best qualified to judge, was easily secured by Mr. Edwin Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts, with a remarkable collection of subjects for so early in the season. Cultural skill of the highest degree of perfection was displayed in the



GROUP OF RHODODENDRONS SHOWN BY MESSRS. JOHN WATERER AND SONS AT THE INTERNATIONAL SHOW.

such methods there. A sprinkling of Clay's or Standen's manure upon the surface, having previously stirred over the latter slightly, does lasting good through washings by frequent water supplies. If a little light loam is placed over the manure, the whole has a fresher look and the presence of manure cannot be detected. It is seldom possible to remove surface soil from a well-grown pot Rose, because of the feeding roots so near to the top; but if the pots are not filled up quite so much at first, there will be useful room available for a fair mulching of some richly-prepared compost, and I have found the new roots simply revel in this, which must, perforce, be beneficial.

Liquid manures take a great place in the feeding of pot Roses. They are easily applied, and most establishments can get one of the most useful. Drainings from the cow-stall or those from the stock-yard are very satisfying. But one need be careful as to the strength when using, never losing sight of the fact that it is not only safer, but decidedly more beneficial when applied more freely, but in a weaker solution.

Guano may be used at the rate of 1½ oz. to the gallon three or four times a week. Of course, it is understood one will make some allowance for the comparative size of pot and plant.

A bag of horse and sheep manure, with a little soot, may be placed to soak in a tank or tub, and will result in a liquid manure free from any scum or sediment. This is more pleasant to use than that from farmyard drainage. As a matter of fact, I have found soot-water one of the best of all liquid

many vegetables staged by this well-known grower on a space 100 feet square. Varieties and kinds were very numerous, and they were set up in the inimitable way that this leading exhibitor has shown is possible for those who care to take the necessary trouble entailed. Everything was in the pink of condition, and among the many indispensable subjects worthy of special notice were Seakale, Asparagus, purple and white Aubergines, Peas and Beans in variety, Celery, Beet, Cauliflowers, Carrots, Tomatoes, Turnips, Cucumbers and a lot of other useful and popular vegetables. Dainty indeed was the setting up of this wonderful collection, and there is little doubt this exhibit afforded much interest for visitors, and also for those who devote themselves especially to vegetable culture.

The lady gardeners from the Thatcham School of Gardening, Berks, were evidently trying to emulate the exhibits from Aldenham House Gardens. On the present occasion their exhibit covered 50 square feet, and the produce staged by these ladies did them very considerable credit. Some thirty to forty different subjects and varieties were set up, embracing such vegetables as Cauliflowers, Cucumbers, Carrots, Onions, Potatoes, Turnips, Cabbages and other subjects, such as Lettuces, Radishes, Tomatoes, &c., all looking extremely well and evincing good culture. The grouping of the different vegetables and the comprehensive character of the display were highly praiseworthy.

Class 399, for twelve distinct kinds of vegetables, brought out three competitors, the produce in each

exhibit being exceptionally good for so early in the season. Asparagus, Peas, such as Duke of Albany and Centenary, Potatoes Ideal and May Queen, Tomatoes Winter Beauty and Perfection, Globe Beet, Flower of Spring and April Cabbages, Late Queen Broccoli and Magnum Bonum Cauliflowers, Improved Telegraph Cucumbers, Princess of Wales French Beans and Early Red Milan Turnips were all noteworthy.

There were only two entries in the class for nine vegetables distinct, and both were highly creditable. Giant French and Perfection Asparagus, Winter Beauty and Satisfaction Tomatoes, First Crop and Magnum Bonum Cauliflowers, Matchless and Pride of the Market Cucumbers, Exhibition Peas, Moore's Cream and Sutton's Cream Marrows, and Early Gem and Champion Scarlet Horn Carrots were splendidly staged.

Only one entry was forthcoming in Class 401 for six vegetables distinct, May Queen Potatoes, Sutton's Favourite Carrot and Magnum Bonum Cauliflower being the more meritorious.

Three exhibits of four varieties of Cucumbers, three fruits of each, made a good show. Matchless, Pride of the Market, Unrivalled, Mascot and Cynosure were the most attractive of the series.

In Class 407, for six varieties of Potatoes, nine tubers of each variety, there were several exhibitors. Balmoral Castle, New Colonist, Crimson Kidney, New Guardian, Empress, The Factor, King of Russets, Snowball, Royalty, Long Keeper and Purple Eyes were worthy of notice.

In another class for three varieties, Gladiator and Harbinger were noteworthy.

In Class 409, for a collection of salads set up in a space not exceeding 9 feet square, the only exhibitor showed a capital lot. Chervil, Ideal Cabbage Lettuce, Peerless Cos Lettuce, Solid White and Superb Pink Celery, Perfection Tomato, Globe Beet, King George Cucumber, Green Curled Endive, Crimson French Breakfast Radish, Nasturtiums, Watercress, Chicory, Onions and Mustard and Cress in variety contributed to make a really good display.

In a smaller class for a collection of salads there were two exhibits, both showing excellent collections of well-matured produce.

In Class 410, for six varieties of Tomatoes, six fruits of each variety, there were three capital collections staged. Eclipse, Winter Beauty, Satisfaction, Perfection, Princess of Wales, Best of All, Invicta, Peach Blossom and Money-maker were all very good.

In a small class for three dishes, distinct varieties, there were five exhibitors. Satisfaction, Sutton's Ar, Princess of Wales, Tuckwood Improved and Winter Beauty were each represented in a well-coloured, highly-finished condition.

In Class 413, for 100 heads of Asparagus, a mammoth bunch of Superb Giant easily out-distanced all the other competitors. Each of the four exhibits, however, was of a high order of merit.

Four lots of French Beans were shown in Class 415. Tender and True, Sutton's Forcing, Fulmer's Forcing and Masterpiece were represented.

In a class for a dish of Broad Beans, the four exhibitors set up Mammoth Longpod, Green Longpod and Giant Seville Longpod in capital form and condition.

Three exhibits of twelve Beets were praiseworthy, Sutton's Globe being chiefly in evidence.

For two varieties of Cauliflowers, six heads of each variety, the three exhibitors staged well. White Queen, Magnum Bonum and Clark's Challenge called for special mention.

There were four exhibits of three varieties of Carrots shown, and these were quite meritorious. Early Gem, Favourite and New Red Intermediate were represented in these exhibits.

Two magnificent exhibits were in Class 398, for twenty-five dishes of vegetables in the open division, not less than twelve kinds or more than two varieties of a kind. His Grace the Duke of Portland showed extremely handsome produce, representing among other subjects Flower of Spring Cabbage, Perfection and Eclipse Tomatoes, King George and Delicacy Cucumbers, Duke of Albany and Early Giant Peas, Giant French Asparagus, White Queen and Magnum Bonum Cauliflowers, Moore's Cream Marrow, Mammoth Longpod Broad Beans, White Leviathan Onion, Globe Beet, Supreme and Ideal Potatoes, Favourite and Champion Scarlet Horn Carrots, Perfection Green Marrow, White Gem and Early Red Milan Turnips, and Golden Ball and Ideal Cabbage Lettuce. This was a superb exhibit, and represented vegetables at their best.

In the other exhibit in the same class, Satisfaction and Eclipse Tomatoes, Sutton's Earliest and Flower of Spring Cabbages, Mushrooms, and Superlative Peas were well done.

For a collection of vegetables set up in a space 50 feet square there were two competitors. Cauliflowers, Tomatoes, Cucumbers, Carrots, Potatoes, Peas, Celery, Lettuces, Marrows, French Beans, Turnips, Asparagus, Seakale, Beet and many other subjects were set up in a dainty and attractive way.

There were six exhibits of a dish of Mushrooms in Class 420, one or two of the exhibits being beautifully even and of good quality.

In Class 421, for a dish of Peas, of the five exhibits Alderman, Hundredfold and Duke of Albany were to be seen in good form and condition.

Eight exhibits in the class for one dish of Potatoes found Ringleader, Balmoral Castle, Gladiator and King Edward VII. the most conspicuous varieties set up.

For nine tubers of a Potato not in commerce there were six excellent lots in competition. Sutton's New White, James Gibson, and The Rival (a seedling from Satisfaction) were the more noteworthy.

Generally speaking, Turnips were very poor.

In Class 426, for three dishes of three varieties of Turnips, there were three competitors. Early Snowball, White Gem, and White and Red Milan were all good.



MESSRS SUTTON AND SONS' EXHIBIT OF "FLOWERS FROM SEEDS" THAT WAS ARRANGED AROUND THE OBELISK AT THE INTERNATIONAL SHOW.

Radishes, three dishes of distinct varieties, were represented by six lots. Long Frame, Crimson Globe, Forcing White Turnip, Round White Tipped Scarlet Turnip, Forcing Olive and French Breakfast called for notice.

In Class 425, for three varieties of Rhubarb, nine sticks of each, there were two exhibits. Champagne (Hawkes), The Sutton and Hobday's Giant were the varieties staged.

There was only one lot of three varieties of Marrows in pairs, and these were quite good. Moore's Cream, Perfection and another white form were in evidence.

A grand collection of vegetables, open to growers for market, arranged effectively on a space not exceeding 100 square feet, brought out market produce to perfection—boxes of Tomatoes and Cucumbers, baskets of Peas, French Beans, Peas, Potatoes, Lettuces, Carrots, Mushrooms and Marrows in wonderful variety, all set up in a most attractive way. High quality characterised this really fine display, and there is little doubt it will be an object-lesson to many.

Messrs. J. Veitch and Sons, Limited, Chelsea, S.W., staged a grand non-competitive collection of vegetables set up in a most attractive manner. Veitch's Victor Peas growing in pots formed the centre of the group, and, in addition, there were, among other good things, All the Year Round Cauliflowers, Chilian Beet, Improved Nonpareil

Cabbage, Market Garden Cabbage, Ideal, Perfection, Improved Telegraph, Challenger and Sensation Cucumbers, Thomas Laxton Pea, Marvel, Invicta, Trophy, Victoria and Ham Green Favourite Tomatoes, Aubergines, Lettuces, Turnips, Mushrooms in variety and a host of other good things.

In the non-competitive section Messrs. J. Carter and Co., High Holborn, W.C., staged a large and comprehensive collection of vegetables, representing Cucumbers, Tomatoes, Cauliflowers, Carrots, Marrows, Potatoes, Beet, Cabbages, Lettuces and Turnips in considerable variety, and made an attractive display.

Class 394, for an effectively-arranged group of vegetables, for growers for market, brought forth a wonderful group of subjects of a most diverse character. The group was arranged in the form of a square, raised in the centre and gradually sloping to the edges. Most artistically were the different subjects grouped, and in many instances they served to represent vegetables in a high state of culture. This group was set up by Messrs. Vilmorin-Andrieux et Cie, Paris, a firm which have done much for vegetable culture in France.

From the growers of the Districts of the Paris-Lyons Mediterranean System splendid forced Asparagus and grand Globe Artichokes were displayed, as well as a large assortment of French Beans, Potatoes, Onions and other subjects.

A collection of Asparagus set up by M. G. Compoint, St. Ouen (Seine), was much admired.

Another large and comprehensive group of vegetables was staged by the Syndicate des Maraichers de la Region Parisienne, France, in which Cauliflowers, Carrots, Onions, Leeks, Cabbages, Lettuces, Turnips and other subjects were attractively displayed.

In the Belgian Section a fine array of good-quality vegetables were staged on long benches. Here were to be seen grand Cauliflowers, Cucumbers, forced Asparagus, Turnips, Celery, Rhubarb, Radishes, Lettuces and Mushrooms in large quantities.

Especially attractive was the large group of vegetables set up in the Dutch Section. The immense group was arranged in a most artistic way at one end of the tent devoted to the Dutch exhibits, and was certainly a most remarkable production. There were pyramids of Cauliflowers many feet in height, Cucumbers treated in a like manner, masses of Carrots, Lettuces, Asparagus, and beautiful salads, all grouped in a manner that exhibitors on the Continent are alone able to do, and all showing the work accomplished by growers there.



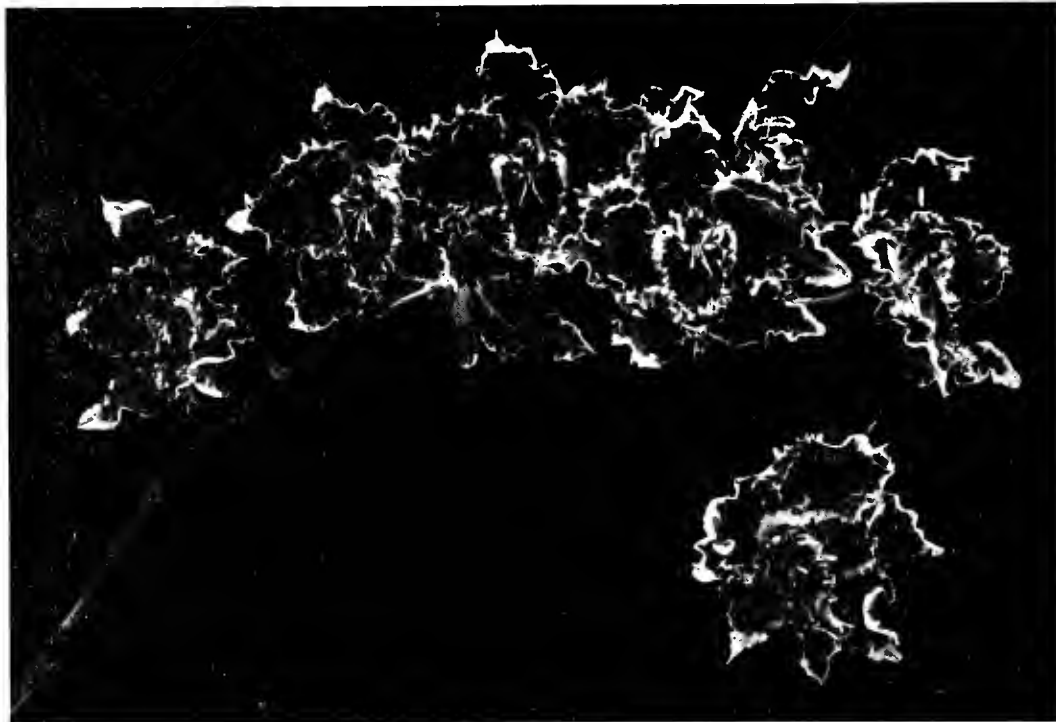
ROCK AND WATER GARDEN DESIGNED AND CONSTRUCTED BY MESSRS. PULHAM AND SONS AT THE CHELSEA SHOW

VIOLAS.

Mr. Charles Turner, Slough, set up baskets of lifted plants, in which many of the popular varieties were represented. Blue Duchess, J. B. Riding, Maggie Mott, White Swan, Mrs. Chichester, Bridal Morn, Admiral of the Blues, Jessie Baker and J. Pilling were the better plants.

In the display covering 100 square feet, Messrs. Gunn and Son, Olton, Warwickshire, set up an attractive group, which lost effect to some extent, however, owing to the somewhat crowded character of the display and the large number of plants of Moseley Perfection set up in the group.

Messrs. Seagrave and Co., Sheffield, made a capital display in the class for twenty Violas distinct. The plants were staged in an admirable way, and represented, among other good things, Countess of Eglinton, Mrs. Henry Wood, Mrs.



ODONTOGLOSSUM HER MAJESTY, A BEAUTIFUL NEW VARIETY SHOWN BY MESSRS. CHARLESWORTH AND CO. AT THE INTERNATIONAL EXHIBITION.

G. Charles, Gladys Finley, Agnes Kay, Mrs. Morrison, Dunbryan, Moseley Perfection and Mary Wynn. The group was beautifully set off with Selaginella and other plants.

In the non-competitive section Violas and Pansies were shown as growing plants. The collection looked very free and nice, and served to illustrate the beauty of these flowers. Virgin White, Duchess of York and Snowflake were good whites; Royal Sovereign and Klondyke, yellows. Edged sorts were represented by Waverley Blue Cloud, White Duchess and Mrs. Chichester; blue varieties by Maggie Mott and Archie Grant; and a fine lot of fancy Pansies helped to make a really charming exhibit.

Viola Moseley Perfection and a carpeting of Viola cornuta purpurea made a beautiful show in the big tent. The former is one of the largest yellow Violas, and the latter a wonderfully profuse bedding sort.

NEW AND RARE PLANTS.

NEW ORCHIDS.

FIRST-CLASS CERTIFICATES.

Odontoglossum amabile Duke of Portland.—A startling variety of an indescribable blending of red and purple, with bars of white on each segment.

Odontoglossum eximium King George.—One of the most outstanding varieties among this prominent genus, the brilliant scarlet maroon of the flowers being conspicuous from a long distance. These two novelties were shown by Messrs. Sander and Sons.

Odontioda Queen Mary.—This is a secondary hybrid between *Odontioda Vuylstekeæ* and *Odontoglossum eximium*. The flowers are light crimson, and the edges are shaded violet with a well-defined and thin white band within the

Odontioda Vuylstekeæ. Shown by F. Menteith Ogilvie, Esq.

Miltonia hyeana Vogelzang.—A handsome variety with exceptionally large ivory white flowers. The lip is of remarkable breadth, and the centre or "eye" of each flower is chrome yellow. Shown by Firmin Lambeau, Bruxelles.

Cattleya Mendelii Queen Mary.—A very taking variety of delicate hues. The lip is of a beautiful soft yellow.

Brasso-Cattleya The King.—The boldest and most noble flower of this section we have ever seen. The diameter across the sepals is about ten inches, and the flowers are most striking and of a glorious colour.

Dendrobium dalhousianum luteum.—Two admirable plants of this novelty were shown, each bearing a profusion of large flowers, pale yellow in colour, with dark chocolate maroon centres.

Cattleya Dirce magnifica.—A first-rate variety and a real improvement on the old form.

Lælio-Cattleya Lustre von Lavingo.—Yet a further improvement upon this beautiful and much-esteemed variety. For brilliance of colour it is hard to excel.

The foregoing were shown by Sir George Holford, and represent the most valuable set of novelties ever shown by one exhibitor at the same time.

Lælia purpurata schroderiana.—A magnificent variety of *L. purpurata* from Baron Schröder's collection.

Miltonia Jules Hye de Crom.—A capital variety, and one much coveted by connoisseurs. The pure white flowers, although undersized, have a broad lip and a very dark and almost black blotch in the centre. Shown by M. Jules Hye de Crom, Belgium.

Awards of Merit were granted to the following: *Odontoglossum ardentissimum* von Carmen (*O. Pescatorei Charlesworthii* × *O. crispum graireianum*), from F. Menteith Ogilvie, Esq.; *Cattleya Mossiæ* Mme. Jules Hye, from M. Lambeau; *Odontioda Bradshawia* var. *Vogelzang*, from M. Lambeau; *Lælio-Cattleya Lustre* var. *Buddha* and *Lælio-Cattleya Gladiator*, from Sir George Holford; *Odontoglossum amabile Princess Mary* (*O. hamyeus* × *O. crispum*), *Odontoglossum crispum* James McNabb and *Odontoglossum majesticum* James W. Whitton (*O. eximium* × *O. percultum*), from Messrs. Sander and Sons; *Lælio-Cattleya Ulysses* (*Lælio-Cattleya Fascinator* × *Cattleya Mossiæ ricickiana*) and *Lælio-Cattleya Ulysses alba*, from Messrs. Charlesworth and Co.; and *Zygopetalum Armstrongæ*, from Messrs. Armstrong and Brown.

NEW PLANTS.

FIRST-CLASS CERTIFICATE.

Leptospermum scoparium Nichollii.—A delightful evergreen shrub from New Zealand, every twig and branch being embowered with rosy red flowers. The plant is obviously of free growth.

AWARDS OF MERIT.

Leptospermum scoparium Boscawenii.—This is a much larger-flowered variety than the above,

margin. The markings are clearly shown in the illustration in last week's issue, page 263. The flowers are fine and large, and the lip is tipped with a band of white.

Odontoglossum Her Majesty.—A large flower of good form, and so heavily blotched with maroon that very little of the light groundwork is to be seen. These two gems were shown by Messrs. Charlesworth and Co.

Odontoglossum eximium Excelsior (ardentissimum crispum).—An exquisite variety, chocolate red in colour and fringed with white. Shown by M. Charles Vuylsteke, the celebrated Orchid hybridist of Loochristi, Belgium.

Odontioda Mrs. F. M. Ogilvie.—A charming variety, chestnut red in colour, surrounded by a darker zone and edged white with a suffusion of pink. The lip is white, with golden markings. Parentage: *Odontoglossum amabile* Royal George ×

and is of hybrid origin. The exhibited examples were about five feet high, the pink blush flowers rendered conspicuous by a great red eye or centre. The above two fine New Zealand subjects were exhibited by the Rev. A. T. Boscawen, Long Rock, Cornwall.

Hydrangea Sargentiana.—One of the most distinct species we have seen. The bracts are white, and emerge and extend on rather long drooping petioles. The leaves are large, obovate acuminate, the stems densely pilose. The plant appears to be of vigorous growth. Shown by the Hon. Vicary Gibbs, Elstree, and Messrs. James Veitch and Sons, Limited, Chelsea.

Papaver orientale Edna Perry.—This is a salmon-coloured variety with deeply-lacerated petals. Very showy.

Papaver orientale Perry's White.—This has handsome, large, finely-cupped flowers, whose rounded petals each have a huge black spot at their base.

Lilium davuricum luteum.—In all probability this is the true *L. davuricum* from Siberia, characterised by its densely woolly stems. The erect flowers are pale orange yellow, heavily spotted with crimson. These three plants were exhibited by Mr. Amos Perry, Enfield.

Polypodium Vidgenii.—A distinct novelty among Ferns, handsome and pleasing withal.

Lastrea patens Mayii.—This is said to be of hybrid origin, and is certainly a good addition to greenhouse Ferns. These were exhibited by Messrs. H. B. May and Sons, Limited, Edmonton.

Deutzia Veitchii.—A most delightful plant, with large flowers of rosy pink colouring appearing freely from Viburnum-like leafage. A delightful acquisition that must take first rank among hardy flowering shrubs. Shown by Messrs. James Veitch and Sons, Limited, Chelsea.

Pyrethrum Queen Mary.—This plant has been before the floral committee on more than one occasion, but never before has it been displayed in such profusion or richness of colouring. It is a double pink-flowered variety. Exhibited by Mr. G. W. Miller, Wisbech.

Lilium myriophyllum.—This handsome trumpet Lily has probably been known to botanists and specialists in this country for half-a-dozen or so years. It is virtually a *Brownii* form in point of flower, whiter generally, and with the narrow leafage almost of *tenuifolium*; hence it is a distinct plant, and withal a good doer. It is a native of China, and promises, by reason of its easy culture and free-flowering, to become popular in gardens. A first-class plant in every way. From Messrs. R. W. Wallace and Co., Colchester.

Oxalis enneaphylla rosea.—This is just a rose-coloured form of a beautiful species from the Falkland Islands that puzzles not a few cultivators in this country at the present time. We should

like to have seen the plant in a more promising or congenial mood. From Mr. Clarence Elliott, Stevenage.

Eremurus Tubergenii.—A yellow-flowered sort, presumably *E. Bungei* and *E. robustus* crossed, though we have no information to this end. The great spires of primrose yellow flowers are very beautiful. Exhibited by Messrs. R. W. Wallace and Co., Colchester.

Begonia Princess Louise.—This is a double-flowered variety, and in all probability one of the most gloriously beautiful of the salmon-coloured shades yet raised. The handsome flowers are

woolly stems and leaves. From Bees, Limited, Liverpool.

Iris squalens Nibelungen.—The standards are clouded, the falls crimson-red.

Iris variegata Ossian.—Standards yellow, falls reddish. These were from Messrs. Barr and Sons, Covent Garden, W.C.

Sweet Pea Mrs. Cuthbertson.—A bicolor with pink standards and white wings.

Sweet Pea Brunette.—This is a self maroon coloured variety.

Sweet Pea Melba.—The colour is salmon, and of a tone valuable and pleasing in decorative work. These were exhibited by Messrs. Dobbie and Co., Edinburgh.



A THREE YEARS' OLD PLANT OF SAXIFRAGA CÆSPITOSA.
(See page 284.)

6 inches across, and are as remarkable for great depth as for size. Exhibited by Messrs. Blackmore and Langdon, Bath.

Calecolaria Veitchii.—A most charming and graceful plant, the result of crossing *C. alba* with an albino form of *C. Golden Glory*. The exhibited examples were 5 feet high, and characterised by narrow, acutely-pointed serrated leaves. The flowers are of ivory or creamy white, and produced in wonderful profusion. A great acquisition. Exhibited by Messrs. R. Veitch and Co., Exeter. Illustrated in our issue for May 25.

Celmisia spectabilis argentea.—A New Zealand species with white flower-heads and rather white

NEW ROSES.

THERE were some really good novelties on view at this wonderful exhibition, although perhaps nothing of a startling character.

Rosarians are always on the alert for something great to be produced, and all who engage in the work of hybridising are fully aware of the great possibilities to be achieved sooner or later.

Although not exhibited in any force, owing to the trying weather recently experienced, Messrs. Alex. Dickson and Sons had sufficient of their grand novelty.

George Dickson, to show visitors what a superb advance it is. When such successful raisers as Messrs. Dickson tell us it is the best thing they have yet produced, no further commendation is required. I have seen the Rose before, and shall never forget the wonderful boxful put up at Ulverston, which secured the unanimous vote of the judges for the gold medal. Perhaps the most beautiful novelty was one from M. Pernet-Ducher.

Mme. Edouard Herriot. This is a real gem in colour, and one that it is difficult to describe. It is a sort of crimson terracotta, with all the fiery colour of Mrs. A. R. Waddell, and also some of *Beauté de Lyon*, combined. Although belonging to the Pernetiana race, it is as free as a Hybrid Tea. This Rose was awarded the special cup as the best novelty.

Freda I believe to be the next best novelty. It is one of which Messrs. Paul and Son of Cheshunt may be justly proud. The depth of bloom and fulness are truly superb, and the colouring is a lovely tint of rose pink. Exhibitors have not had a more useful Rose than this for a long time, and, judging from its strong growth, it should be equally grand as a garden variety.

Mrs. E. Alford may be best described as a fuller and more superb *Mme. Abel Chatenay* with the grand contour of a very superior *La France*. The long, stiff stems proclaim it a splendid forcer.

Mrs. George Beckwith is a wondrous colour, resembling *Rayon d'Or*, but with a superior form

and apparently strong, erect growth. This and one named Constance came from M. Pernet-Ducher, and both favour Rayon d'Or in the glorious deep yellow colouring. The notorious

Sunburst was not shown in quite its true character. Some flowers were of the deep golden colour of Lady Hillingdon, but others of the first growth were quite pale. It is, nevertheless, a superb bloom, the petals of great texture and the form grand. It is a sort of glorified Mrs. Aaron Ward, still one of the loveliest of Roses for the greenhouse as well as for the garden, but the growth of Sunburst is longer, more of the Antoine Rivoire type, carrying the blooms quite erect. It may not supplant Lady Hillingdon in midwinter, but will be a far better Rose from the second growth.

Alexander Hill Gray was in exquisite form from Newtownards, and I predict for it a great future. The clearness of colouring and the large petals are truly beautiful. Probably the yellow colouring will be even deeper outdoors.

Melody is another good thing from Ireland. I am not surprised this Rose is going strong in America, for there is a superb finish and fulness about it that must commend it to all.

Sallie secured for Messrs. B. R. Cant and Sons a first prize. It is a fine Rose of the Joseph Hill type, but richer in colour. It will be a grand variety for the exhibitor, also for the garden.

Mme. Charles Lutand is of splendid growth, also form, and I believe from the second growth will be a formidable rival to Marquise de Sinety. As seen here the blooms were paler.

Ophelia is a pretty Hybrid Tea of tints and growth, reminding one of Clara Watson, only not so full. P.

FLOWER GARDEN.

WORK AMONG THE AURICULAS.

Potting.—It has already been pointed out in this column that the month of May is usually the best for potting plants which demand such attention; but if it could not possibly be accomplished by the end of last month, let it be finished with the utmost despatch now that June is in. Bear in mind that any material delay now will force the postponement of the operation until the late summer, and this cannot be regarded as satisfactory. Use a plain compost in which sound, fibrous loam plays by far the most important part, and see that the tap and any other roots which are not in perfect health are cut away before the plant goes into the fresh soil. With the object of reducing the necessity for too frequent watering afterwards, keep the frame a little closer to reduce the evaporation. Any plant, no matter what its size or age may be, or whether it demands repotting or not, which shows the

slightest indication of being in ill-health must have instant attention, as it is commonly found that an American blight-like animal is attacking the roots, and unless it is promptly destroyed the plant will soon be ruined.

Watering.—It has been suggested in the preceding paragraph that plants which have just been potted must have no more water than is absolutely imperative; but established specimens require regular supplies if they are to continue in satisfactory condition. It must not be inferred from this that it is suggested to give water every day, because nothing of the kind is meant. The thing is to study the plants so closely and intelligently that the necessity for water is

unfavourable to the enemy, as prevention is always preferable to cure. The frame should be given a northern aspect, not only because this is exceedingly beneficial to the plants in the summer months, but also because the thrips do not like the cool atmosphere which is favoured by this simple expedient. Red spider, too, will make its presence felt in arid frames, so that much good follows the cool aspect and the correct watering. If it should become necessary to use an exterminator against enemies of this nature, I know of nothing superior to XL All for the purpose.

An Insidious Enemy.—Among young plants, or even among the young leaves of old plants, there is no enemy that causes so much trouble and worry as a small, dark-coloured maggot, which bores into the heart of the plant and will cause its death in a very short time. The keenest watch alone will suffice to detect its presence, and the outward and visible sign takes the form of a drawing together of the small leaves with an extremely fine web. Immediately this is seen, examine the plant minutely, because it will almost always be found that between the folds of the leaf so cleverly drawn together a dark maggot will be seen. Growers will not demand a suggestion from me or any other writer as to the readiest means of meting out instant death to the intruder.

Plants in Seed.—The amateur who indulges in cross-fertilisation in the hope of producing varieties superior in merit to any now in cultivation has a difficult task in front of him; but if he proceeds on intelligent lines he is sure to produce something that will bring him infinite pleasure. At the present time, in normal conditions, the seeds will be developing steadily, and in the ordinary course of events they will ripen between the beginning and the end of July. It is not desirable that these plants should be disturbed for potting, and, as a rule, the seeds will be the better if rather less water is given than to the bulk of the collection. F. R.



ROSE MME. EDOUARD HERRIOT, THE BEST SEEDLING ROSE SHOWN AT THE INTERNATIONAL EXHIBITION. RAISED AND EXHIBITED BY M. PERNET-DUCHER.

anticipated by a few hours, as this will mean that the soil in the pots can never become dry on the one hand or sodden on the other. An equable condition of soil moisture is peculiarly conducive to success.

Thrips.—It is something to be regretted that yellow and black thrips show a marked partiality for Auriculas; but they only appear during hot, dry weather, so that it is not difficult for the cultivator to be prepared to give them a more cordial reception than they are able properly to appreciate. Immediately an attack is observed—and it must be seen early to prevent real injury—take reliable steps to suppress it. Better still, however, is it to endeavour to create conditions that are

alpine plants here at Woodford, and makes an excellent subject for carpeting a semi-moist bank halfway down some steeply-sloping part of the alpine garden, where it will not receive the fiercest of the sun's rays. The plant illustrated on page 283 consisted of a 2½-inch potful rather less than three years ago, and has now, without any further attention, made a patch 2 feet 6 inches in diameter. The flowers are very pale cream, and are produced in such quantities as to entirely hide the foliage. The soil I give it is just ordinary garden loam (by no means of the best) well mixed with grit and a little leaf-mould. The position halfway down the bank of rockwork and facing west ensures its roots being moist. R. A. MALBY.

SAXIFRAGA CÆSPITOSA.

THIS, one of the Mossy section of this beautiful and interesting family, is one of the freest of my

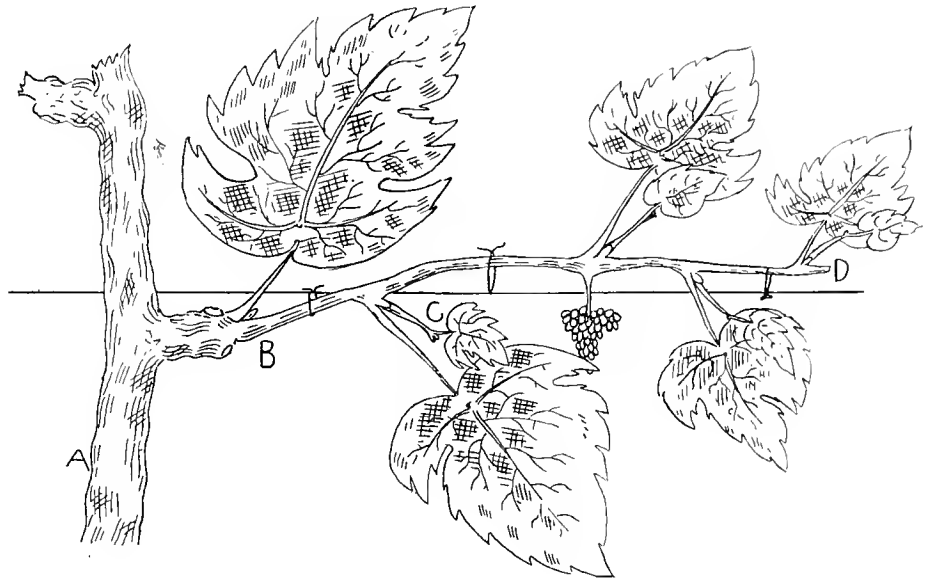
GARDENING FOR BEGINNERS.

TYING DOWN AND STOPPING VINES AND THINNING GRAPES.

ALTHOUGH Vine shoots are tough when matured and will withstand much bending and still not break, they are very brittle when in a young state, and, in fact, until the berries begin to swell freely. This being recognised, the cultivator must exercise considerable care when tying down the young shoots to the wires under the glass. The work must be done gradually; if they are in the first instance brought down level with the wires, they will snap off. First of all, the tips should be pinched off and the ends slightly pulled away from the glass and made secure to the wires with soft strands of matting. In a few days' time the shoots may be depressed 2 inches more, and so on until they are brought down to the wires as shown in the accompanying sketch.

Now, it is very important that the whole of the roof space be covered with foliage, but only with the main leaves and the first leaf (c) on each lateral shoot. From the main rod, A, the side shoots or branches will grow as shown, alternately, one on one side and another on the other side; then the branches of the Vines will dovetail, as it were, into each other, and so completely furnish the roof with healthy foliage without causing any overcrowding.

The Illustrations Explained.—Fig. 1: A, Vine rod; B, a side shoot or branch growing from a spur; C, a lateral growth, which must be stopped at the first leaf, the one leaf only being retained throughout the summer; the sublateral shoots which grow from its base must be regularly removed while they are quite small. Not more than one bunch of Grapes must be allowed to mature on a



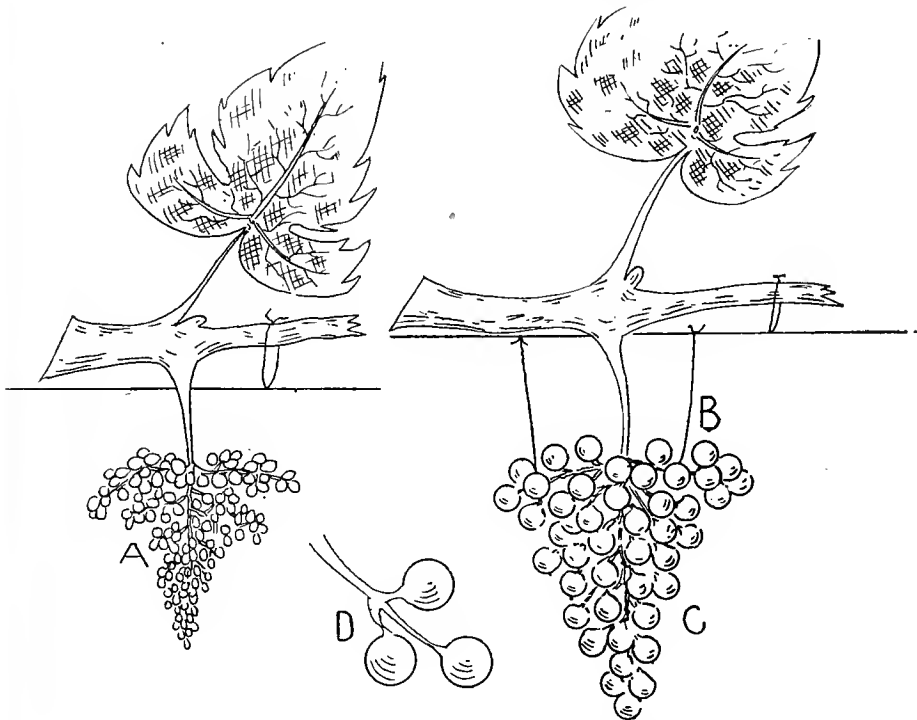
1.—VINE SHOOTS MUST BE TIED DOWN GRADUALLY, OTHERWISE THEY WILL SNAP OFF.

branch, and the latter should be stopped at two joints beyond the bunch, as shown at D. The individual Vine must only be allowed to mature 1lb. of Grapes per foot run of main rod. One large leaf, kept healthy and with ample room to grow in, will be of more value than three leaves occupying the same space.

Thinning-Out the Berries.—The amateur should never be in too much hurry to cut out the berries

from the bunches, as they should be left to grow large enough to show which are well "stoned" and which are not. On the other hand, undue delay in the matter of thinning would not prove very satisfactory, as the berries left in would get marked and not swell to as large a size as they should. Vines growing in cool structures and greenhouses start growth almost naturally, and are not ready for thinning as soon as those assisted by fire-heat, but the Grapes finish well in ordinary seasons. A bunch unthinned, as shown at A (Fig. 2), contains, if the "set" has been a good one, at least three times more berries than should be left to mature. In the first place, the cultivator must cut out the very small, stoneless berries, using a pair of bright, dry and clean Grape scissors. The berries left must not be touched with either hands or tools. A smooth, forked stick may be used to steady the bunch while the surplus berries are being cut out; B shows how the shoulders must be neatly tied up to the wires, and C depicts the bunch after being thinned, the berries swelling freely. The cultivator must commence at the bottom of the bunch and remove the surplus berries upwards, also from the extreme ends of the shoulders, and finish at the top of the bunch. More berries may be left, in proportion, at the top than at the bottom, because there is more room there for them to swell in. Usually there are three berries at the extreme ends of side shoulders, as shown at D; these must not be cut out. Short-stemmed berries require more severe thinning than long-stemmed ones.

G. G.



2.—BEFORE AND AFTER THINNING. IN THE UNTHINNED BUNCH THERE ARE AT LEAST THREE TIMES MORE BERRIES THAN SHOULD BE LEFT TO MATURE.

TOMATOES AND SIDE SHOOTS.

At this time of the year side shoots appear from the axils of the leaves and main stem with remarkable rapidity. All side growths should be pinched out in the early stages; this will give greater nourishment to the trusses of fruits forming on the main stem.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Primula malacoides.—This new Primula, of comparatively recent introduction, makes a charming plant for the cool greenhouse in the early spring months. To obtain nice plants, sow the seeds now.

Chrysanthemums.—The work of the final potting will soon be engaging attention. To ensure success it is desirable that a suitable compost be prepared for them, and if this is mixed and prepared a week or so beforehand, it is to be preferred. Avoid having this too fine; the staple part should consist of good, fibrous loam, to which add some leaf-mould and spent Mushroom-bed manure, according to the nature of the loam, together with a sprinkling of soot, wood-ashes, a little patent plant food, with a liberal addition of coarse road or river sand. Thoroughly harden the plants before potting, pot firmly, and if space is left for further top-dressings, this will be an advantage.

The Flower Garden.

Verbenas.—When well grown, few of the occupants of our borders during the summer months create a greater display. On well-prepared ground these grow freely, when attention is given them as to pegging down the growths. Allow the plants at least a foot apart, and sprinkle with a rosed can in the evening.

Sweet Peas.—The earliest flowers from the autumn-sown plants will soon be ready. With these, and those sown later, any little attention required, such as tying up the haulm, should be done. A little nitrate of soda sprinkled beside the rows in showery weather or well watered in may be given, but avoid an excess.

Pentstemons.—The seedlings raised this year will now be fit for planting out, and will give a grand display in the late summer months. Keep the Dutch hoe going between the plants. Seedlings raised from a good strain are preferable to cuttings, as when the latter method of raising is continued year after year the vigour of the plants deteriorates.

The Rose Garden.

Climbing Roses.—These are growing apace and will need tying in to the poles or pergolas. Let the work appear when finished as natural as possible, so that the flowers when they expand are seen to their best advantage. If the plants are attacked by aphid, syringe thoroughly in the evening.

Mildew.—This, if allowed to go on unchecked, will soon disfigure and exhaust the plants' energies. Syringe with a solution of sulphide of potassium, half an ounce to the gallon, or dust the foliage with black sulphur when the dew is on the plants, or the foliage may be damped with a syringe producing a fine spray.

Roses on Walls.—During hot weather especially the growth of these will be much accelerated and the quality of the flowers improved if the growths are syringed either in the early morning or evening. Apply a good mulch to the surface of the soil and water copiously, as Roses in such positions frequently derive but little benefit from occasional rains.

Hardy Fruit Garden.

Currants.—The bushes of Red and White Currants will benefit for more reasons than one if the shoots are tipped back within a week or so. In the first place, aphides are removed and more air and light can reach the fruits, while the appearance of the bushes is improved, and admits of a covering of nets being placed on with greater ease as soon as the berries commence to colour.

Gooseberries.—Where heavy crops of the best dessert varieties are hanging on the bushes and good fruits are wanted later on, the fruits can be thinned now for preserving and for use in the kitchen, which will allow the remaining berries to swell to a larger size.

Fruits Under Glass.

Late Houses of Peaches and Nectarines.—Make sure that the borders do not suffer for the want of water. With frequent syringings it often happens that the borders appear well supplied with moisture, as they are on the surface,

but the lower parts of the border are quite dry. Apply stimulants, except while the fruits are stoning, when the trees should not be excited in any way. Give plenty of air, syringe twice daily, and damp all surfaces of the house.

Fire-heat.—During the next month or two little assistance should be required by artificial heat, especially with Muscat and midseason Grapes. For Figs and Melons a slight circulation is wanted in the pipes at night, and the extra expense is well repaid. When the weather promises fine, the heat should be shut off or the fire allowed to go out quite early in the day.

The Kitchen Garden.

Celery.—Continue to plant out for late supplies. Choose showery weather for this, if possible, and as quickly as possible plant after lifting with a good ball of soil attached. Give a good watering in and keep the plants damped over. Once a week give the plants a dusting of soot, which will do much to ward off the fly.

Leeks.—For late kitchen use make a further planting. Select a shady part of the garden, bore holes with a dibber and drop the young plants to the bottom, and close in with some of the finest soil at the roots.

Potatoes.—Earth up the crops of these as becomes necessary, and where the growths are too numerous, thin out the weakest, or a heavy crop of haulm will be grown at the expense of the tubers.

Onions.—The transplanted ones that were raised in heat at the beginning of the year should have the soil between the rows constantly stirred with the Dutch hoe, and be damped over as often as possible in the absence of rain. Give a dusting of soot occasionally, and as soon as these are growing freely a little artificial manure may be given during showery weather. The main crop requires similar treatment. Carefully hand-weed when necessary in the rows, and pull evenly from the bed as required for salads, etc., but not too severely.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Grape-Thinning.—The late Hamburgs and Alicantes are now at the thinning stage, the former needing a much less number of berries to be removed than the latter. Ugly shoulders should be cut off.

Feeding Vines.—Long-established Vines must be well fed to be satisfactory. At the above stage it is therefore important to apply to the borders a dressing of sifted pigeon-manure, being careful to keep the top ventilators slightly open at night to allow of the escape of noxious gases. Soot is also beneficial, and when applying water to the borders let it be strengthened with a soluble manure.

Peaches.—Before the fruits mature on early trees, soak the borders with water, and if there is the least fear of red spider attacking the foliage, syringe with a solution of Quassia Extract. This may be supplemented by fumigating the structure with Tobacco cloth, but always bear in mind that the Peach is easily damaged by insecticides, and Tobacco fumes especially. Pinch out all the lateral growths which push from the axils of shoots of the current year. The ventilators of Peach-houses need never be closed during the summer months unless for hastening the ripening of a particular crop.

The Flower Garden.

Plant-Supporting.—See that the slower-growing perennials are not left without supports. A piece of string lightly fixed round the stems is often sufficient.

Tuberous Begonias.—These may now be planted. Ours for planting out are forwarded in boxes thinly disposed, and transplanted with large balls of roots and soil. They should be rather deeply planted, so that the tubers are covered with at least 2 inches of soil and the roots well into the ground. Soak the soil of the beds as planting proceeds, and if a carpet of Lobelia or other low-growing plant is contemplated,

delay planting till the next day, when the ground will be in a fit condition to work.

Dahlias.—Plant these at once to ensure a not too late bloom. These are voracious feeders, and provision to meet their requirements should be made before planting. Some growers prepare the site of each plant by the addition of compost. If the soil is at all inclined to dryness, soak it with soft water on the conclusion of operations, which should include a light stick to which to tie the shoot, to be afterwards replaced by a stout stake. I am using for effect a few of the large-flowered kinds, of which Souvenir de l'Douzain is the chief; also Geisha, Liberty, Grand Duc Alexis, Beauty of Arundel and others.

Reserve Plants.—A small percentage of those plants which experience shows sometimes fail in part to grow should not be kept in the receptacles in which they were prepared for planting-out, but either in others where fresh soil and more space can be given them or in a reserve quarter of the kitchen garden. In addition there should be a quantity of late-flowering plants provided, such as African Marigolds, China Asters in variety and Chrysanthemums, of which I annually use a very large number for transplanting while in flower. Besides these it is essential to pot up Lobelias for stock, and Iresines and other tender things should also be preserved for the same purpose.

The Plant-Houses.

Hippeastrums.—As soon as seeds are matured sow at once, by which practice a year at least is gained in the flowering of the seedlings.

Tree Carnations.—Be careful after this in stopping. Cuttings of scarce varieties rooted last month need not be stopped at all, but left to grow with a central stem and the natural breaks, which are sure to become strong before autumn. Five-inch pots are the correct size for these.

Chrysanthemums.—The final potting of these should be accomplished forthwith. Souvenir de la Petite Amie, niveum and Miss A. Pockett are invaluable grown in 6-inch pots for Christmas, and many of the singles also do well in small pots; but for cut flowers they produce many more when larger pots are used. Miss Margaret and Annie Lowe are splendid for cutting, and of these several may be potted into one receptacle, as they do not break freely. It saves a large amount of labour in watering to plunge the pots, also after-annoyance if the plants are staked at once and made secure from winds by fixing them to wires or other supporting material.

Insects.—These multiply if left unmolested at an amazing rate during the summer months. The mite on Begonia Gloire de Lorraine can only be kept down by nicotine vapouring; thrips on Dracenas by the same means or dipping in water at 150°. Mealy bug on many kinds of plants is easily destroyed by dipping the plants in hot water, by spraying frequently with an approved insecticide, and by dusting with Tobacco powder. If it gains a footing on Grape Vines, repeated syringing with water that has been boiled and allowed to cool to 150° to 180° kills the insects and scarcely damages the clusters of Grapes, due care being observed. Quassia is excellent for aphid.

The Vegetable Garden.

Onions.—A dressing of soot and any other suitable manure should be applied now that the plants are growing vigorously, and the surface be thereafter stirred.

Parsley.—The main Parsley-bed should be planted from seedlings raised in the open. Set about twelve inches to fifteen inches apart in nice friable, but not too highly-enriched soil, which causes a coarse growth. Dress the ground with soot as a preventive of root maggot.

Seeds to Sow.—A little Endive may be sown for use in autumn, and the very dark-hued Beets, such as Cattell's, should not be sown earlier, else they will grow too coarse. Also sow a few seeds of London Colewort, waiting a fortnight to make the main sowing. This is a useful vegetable not much grown in the North. At the same time sow seeds of a good second-early Cauliflower. Spinach, Mustard and Cress, Radishes and Lettuces must be sown at short intervals not exceeding ten days, and Lettuces should be regularly transplanted, a few at a time, in order to secure a constant supply.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

HORTICULTURAL SUNDRIES AT THE INTERNATIONAL EXHIBITION.

The Leyton Timber Company, Leyton, Essex, were showing rustic summer-houses, garden seats, tables, garden furniture and fencing generally.

The Twelve Hours Stove Syndicate, Westminster, had a most useful exhibit of their well-known twelve-hour stoves, suitable for heating amateurs' greenhouses, ranging in various sizes, which could be adapted to meet all requirements.

Messrs. James Crispin and Sons, Bristol, showed greenhouses and conservatories suitable for either large or small gardens, which were well built and adapted for all classes of plants. In addition, the special boilers of the independent saddle type, namely, "Mona," "Robin Hood" and "Senior," were shown in various sizes.

Messrs. James Weeks and Co., Chelsea, were exhibiting greenhouses and heating apparatus generally. Among the latter was to be noticed one of the "Strebel" boilers, with an automatic draught attachment for regulating the fire.

Messrs. Skinner, Board and Co., horticultural builders, Bristol, showed a specimen greenhouse built on their well-known wire tension principle, having a curved iron framed roof. The greenhouses built on this system are easily portable and practically imperishable, as there is no putty to require constant attention and repair, and the maximum amount of light is thus obtained.

The Fernden Fencing Company, Tothill Street, Westminster, S.W., had a pretty and artistic arrangement of fencing and trellis-work in various forms.

"Dryad" furniture was shown from Mr. H. H. Peach, Thornton Lane, Leicester. His celebrated cane manufactures are most suitable for garden and summer-house work.

Messrs. George F. Braggins and Co., Banbury, Oxon, were showing gates suitable for garden and estate work of all descriptions, and a very useful form of hand-cart.

Mr. John Pinches of 3, Crown Buildings, Camberwell, showed the well-known "Acme" labels and wire goods, one of the specialities being a Rose box, the lid of which lifts off quite easily. Two wire supports may be placed through holes at the back of the box in order to raise it on the exhibition table sufficiently high to show off the blooms to the best advantage without the use of blocks, as used in the ordinary way. This is claimed to be the lightest box on the market, which is a consideration to exhibitors. Rose trainers of all descriptions were shown. A special machine for packing Roses and other tall-growing plants, which folds up quite close, and firmly holds a covering around the plants with a ratchet adjustment, to any size, until the packet is completely strung, was also shown. It is composed of a series of semi-circular rings, which either open wide or close up at will.

Messrs. Pulham and Sons, Newman Street, Oxford Street, London, had a large and varied selection of stone garden ornaments, including vases, fountains, sundials and other special forms.

The Thames Bank (Blackfriars) Iron Company, Limited, Upper Crown Street, E.C., were showing several of their special lines in heating apparatus, including upright and horizontal tubular boilers, and the "Crown" and "Economic" as special lines; also the "Heel" boiler for amateur work.

Mr. H. C. Slingsby, Old Street, E.C., was showing the Slingsby steel-backed ladder, a light form which is very strong and durable.

Messrs. Rowell and Co., Old Queen Street, Westminster, were showing iron fencing, tree guards and trainers of their well-known make.

Messrs. Höntsch and Co., Niedersiedlitz, Dresden, had a smart exhibit, including a section of greenhouse showing the ventilating gear and construction complete, together with several small models of the various types of greenhouses and conservatories which they are prepared to construct.

Messrs. Walters and Co., Amberley Grove, Croydon, who are famous for their artistic trellis-work, fencing and garden furniture, had an effective display in up-to-date designs.

Messrs. T. Crowther and Son, North End Road, Fulham, had a most interesting exhibit of unique garden ornaments, including old stone vases and wells, lead vases and pedestals, garden seats and temples.

Messrs. Lloyd Lawrence and Co., 29, Worship Street, E.C., had examples of their famous Pennsylvania lawn-mower in all sizes, also seed drills and the well-known "Planet Jr." hoes.

Messrs. S. and E. Collier, Limited, Reading, were showing pottery in many varied and artistic forms.

The German Potash Syndicate, 117, Victoria Street, S.W., had an interesting exhibit showing plants in various stages of growth which had been treated with additional potash.

Messrs. C. P. Kinnell and Co., 65A, Southwark Street, S.E., had a most representative selection of their well-known goods on view, including the "Rochford," "Bisson," "Covent Garden" and "Anglian" boilers. The last-named was represented by a monster capable of heating from 11,000 to 12,000 feet of 4-inch piping. In the 11,000 size of this boiler a great advance has recently been made. One of the sections had been arranged with the flow coming outwards on both sides, which may be had entirely in this form if required. This is a most important factor for those who depend on shallow stokeholds. This boiler, working up to 2,700 feet of 4-inch piping, can be set in a depth of 4 feet 9 inches, which is a saving of at least 9 inches over those having top flows.

The Hon. Mrs. R. C. Grosvenor, designer of gardens, Morrisburn House, Woking, had an interesting page with a thatched summer-house and a selection of garden ornaments, surrounded by an artistic fencing arrangement.

Messrs. Vipan and Headley, Limited, Leicester, were showing garden furniture of all descriptions, and also the "Wyvern" lawn-mower, which is entirely hand-made, and a solid oak Rose temple.

Messrs. William Duncan Tucker and Sons, Limited, 27, Cannon Street, E.C., the well-known horticultural builders, had some excellent specimen plant houses and conservatories on view, together with other specialities for which this firm is noted.

Messrs. William Poupart, Limited, Fernleigh Orchards, Twickenham, had a large and varied exhibit of bottled fruits, which were clearly and carefully preserved in the best possible manner.

Messrs. Macmillan and Co., horticultural publishers, London, were showing a choice selection of standard works in connection with gardening.

Messrs. G. Jackman and Sons, Woking, Surrey, had a nice selection of garden plans and designs. This firm also showed a model of their tree-planting machine, which enables large specimen trees to be removed and transplanted at any

distance. The exhibit was situated in the open near the south-east end of the large tent.

Miss Helen Colt of Hampstead had an exhibit of models showing the possibilities of what may be done in town and suburban gardens.

Miss Wheeler, Hampshire, also showed photographs and views of students' work in school gardens.

Messrs. Charles Letts, diarists, London, had specimens of their well-known diaries in all sizes on view.

Messrs. J. Pither, Limited, Uxbridge, Middlesex, were showing examples of Mushroom spawn.

The Selborne nesting-boxes were shown by Mr. Wilfred Mark Webb of Odstock, Hanwell.

The Pwllbach Colliery Company, Limited, Swansea, were showing specimens of their well-known horticultural coal in various grades.

Dansyz Virus, 52, Leadenhall Street, E.C., were showing their well-known rat poison, which, although fatal to the rodents in question, is perfectly harmless to human beings.

Messrs. R. A. Lister and Co., Limited, Dursley, displayed a most effective exhibit of well-made tubs, suitable for home and garden use, in a large and varied selection of artistic designs.

Messrs. Pilkington Brothers, Limited, St. Helens, Lancashire, had samples of their well-known cloches on view.

Robert Sydenham, Limited, Tenby Street, Birmingham, made a large display of rural table decorations in many new and choice designs, the whole being arranged in an artistic manner, setting forth the great advantage of this special form of table decoration.

Mr. James George of Putney showed his well-known specialities in horticultural sundries.

Messrs. Lawes Chemical Company, Limited, 59, Mark Lane, E.C., showed their well-known manures.

The Bon Arbour Chemical Company, Paterson, New Jersey, U.S.A., showed samples of their special goods.

Mr. Julius Hansen, Pinneberg, Hobstein, Germany, showed Lily of the Valley crowns, for which this house is noted.

Messrs. James Green and Nephew, Queen Victoria Street, E.C., had some excellent examples of their well-known glass and glazed ware, suitable for all horticultural purposes.

Messrs. Blake and Mackenzie, Limited, Islington, Liverpool, showed specimens of their paper pots, which are now in such great demand for raising seedling plants, &c.

The Elsenham Jam Company, Elsenham, Essex, showed specimens of their well-known jams and preserves.

The Boundary Chemical Company, Cranmer Street, Liverpool, were well to the fore with their various compounds for all garden purposes, a notable feature being the "Simplicitas" Sweet Pea trainer.

Messrs. William Cooper and Nephews, Berkhamsted, had several specialities, notably the celebrated V Fluids, both as insecticides and fungicides.

Messrs. H. Pattison and Co., Streatham, S.W., showed specimens of their lawn boots for horses in various sizes.

Messrs. Corry and Co., Shad Thames, E.C., showed to advantage their well-known goods, especially the famous "Niquas" and "Summer Cloud" shading.

Messrs. E. A. White, Limited, Beltring, Paddock Wood, Kent, had the latest examples and

improvements in their well-known syringe on view, together with "Abol" insecticide.

The One and All Agricultural and Horticultural Association of 92, Long Acre showed garden seeds and fertilisers.

Mr. G. H. Richards, 234, Borough High Street, London, S.E., had a representative exhibit of the latest and most up-to-date garden sundries and appliances, including insecticides and manures of the renowned "XL All" brand.

Messrs. Robinson Brothers, Limited, West Bromwich, had their "Guaranteed Gardenalities" well to the fore. Among these were "Carmona" Fertiliser and Clift's Fluid, a soil steriliser and germicide.

The French Cloche Company, Caxton House, Westminster, had their well-known cloches, special seeds for intensive culture, and other French gardening requisites on view.

Messrs. Barr and Sons, King Street, Covent Garden, showed the Pinozone Magazine Sprayer, together with Pinozone Essence, which destroys all microbes and germs and is non-poisonous and non-injurious, together with "Phytobroma" and other garden requisites.

The Sanitas Company, Limited, showed their well-known disinfecting fluid.

Mr. Arthur E. Hawker, Mark Lane, E.C., showed Horticol, a most useful preparation for dressing seeds preparatory to sowing, which is a protection from birds and vermin.

Cirengol, a non-poisonous insecticide, was also shown as a remedy for green fly and other garden pests.

Messrs. C. H. Glover and Co., Limited, Old Kent Road, had examples of useful boxes suitable for packing fruit, flowers and other produce.

Messrs. J. Bentley, Limited, Hull, showed their well-known weed-destroyer and fertilising compound.

Mr. F. C. Edwards, Leeds, showed sundries of various descriptions.

Plant Plantoids, 5, Lloyd's Avenue, E.C., the most recently-formed manure and plant food in tablet form, was on view.

Price's Patent Candle Company, Limited, showed the well-known Gishurst Compound, a remedy for insect pests, and Gishurstine for waterproofing boots, &c.

Messrs. Alexander Cross and Sons, Hope Street, Glasgow, were exhibiting their well-known ant destroyer and clubicide.

Mr. John Groom, Seckforde Street, showed artificial flowers of excellent quality and design.

Messrs. Jeyes, Limited, Cannon Street, E.C., had examples of their sprayers and spray fluids on view.

Mr. A. C. Harris, Leicester, showed that useful little article, the "Gripper" garden tool, and also the lawn-mower rabbit-cage.

The Halliford French Garden of Shepperton, Middlesex, showed French garden goods and produce.

Messrs. Lewis Berger and Sons, Homerton, N.E., had several examples of specially-prepared compounds for horticultural use.

Messrs. Merryweather and Sons, Greenwich and Long Acre, the well-known fire-engine manufacturers, had the entire fire protection arrangements placed in their hands, a number of hand fire-pumps and chemical extinguishers being on the ground, with men on duty ready for promptly checking any outbreak that might have occurred.

Messrs. Walter Voss and Co., Glengall Road, Millwall, E., had a large and interesting display

of specialities for various garden purposes. Among these may be noted the Bordeaux-Arsenite wash, thus being a compound insecticide and fungicide, which is, therefore, applied at one operation. Another special preparation is a priming glaze, a preparation for dressing the freshly-cut surface of wounds, which prevents canker or other fungoid growths, and causes a quick and certain healing.

The Four Oaks Spraying Machine Company, Sutton Coldfield, Birmingham, had their noted sprayers and other specialities in many and varied forms.

The Patent Safety Ladder Company, Peterborough, had some excellent ladders in various sizes suitable for all purposes.

The Folding Span Light Company, Wexham Road, Slough, showed examples of their special span lights, illustrating the many uses to which these lights can be put.

Messrs. Wakely Brothers and Co., Bankside, London, S.E., had their well-known Hop Manure to the fore. This is the most perfect substitute for stable manure yet to be obtained, and is clean and sweet to use.

Messrs. James Carter and Co., Raynes Park, had an excellent model of the new buildings at Raynes Park; they also staged an interesting feature of seed testing and germination as carried out by them.

In the Orchid Tent, Mr Edward White, 7, Victoria Street, S.W., showed a model garden designed for C Dyson Perrin Esq., Ardross Castle Ross-shire, consisting of castle and broad terrace leading to the sunk garden, followed by a formal design thence to an ornamental fish-pond, rock and water garden, and a general arrangement of effective and artistic planting.

Clay's Fertilizer, the standard plant food, was used throughout the gardens and grounds of the exhibition.

Nesting-boxes were shown by the Royal Society for the Protection of Birds, the offices of which are situated at 23, Queen Anne's Gate, Westminster, S.W.

BOOKS.

La Vie a la Campagne.—This interesting French publication devotes a considerable amount of space to the horticultural art, both practical and theoretical. The artistic also receives consideration, and in the last number to hand (March 15) we find a vast amount of information by Messrs. Maumené, Gibault and Lambert on the subject of decoration in ancient gardens. Beside the text there are nearly two hundred views of old gardens and garden accessories. Statuary, vases, fountains, sundials, pergolas, seats and benches, cascades, and innumerable designs and devices for the ornamentation of gardens are given in great profusion. The collection of so much interesting matter must have occupied the writers for a considerable time, and they are to be congratulated on presenting it to their readers in so attractive a form.

Vines and Vine Culture.—It is with feelings of the deepest satisfaction we see lying before us a fifth edition of this really famous book, with which the name of an old and highly-esteemed friend and a great gardener, Archibald F. Barron, is so closely associated. To his widow, Mrs. Barron,

the work of revising the earlier editions, so as to make the new and present one fully up to date, must have been a labour of love. In that labour she has had the assistance of some of her late husband's devoted friends, and secured from other sources new matter and some fresh illustrations, including bunches of Grapes, all of which add both interest and charm to the book. Unlike some of the would-be instructors of to-day, Mr. Barron was not a great book-writer. This one work on the Vine as it exists, is grown, and now presented will be a garden classic when myriads of the fugitive compilations called books to-day have disappeared. It was Mr. Barron's remarkable fidelity to truth, his energy in obtaining exact information, and, above all, his unrivalled opportunities at the old gardens of the Royal Horticultural Society, Chiswick, where almost every Grape named in the book was grown for trial in some one or other of the houses, that enabled him to acquire information relating to Vines not open to others to obtain. If many years of his life were spent in getting into shape all this information, the present generation of Vine-growers can utilise it to its utmost value if they secure this new edition. We specially rejoice that the revisers have, in their descriptions of Vines, so thoroughly brought the list up to date. New Vines come slowly, happily, and since the 1802 edition there have come into commerce to add to the long list of varieties Diamond Jubilee, Lady Hastings, Melton Constable, Directeur Tisserand and Prince of Wales, of house Grapes; and Gamay Noir, the French wine Grape, and Reine Olga, the red wall Grape, as outdoor varieties. Of the bunch illustrations, new ones are Muscat Champion, Prince of Wales and Syrian, each one good. These are supplemented by several garden decorative Vines of the new or Chinese species, an entirely new chapter devoted to the descriptions of ornamental Vitis being added. We welcome the retention of the picture of the old span vinery at Chiswick, one of the most remarkable vineries ever seen. In that house Mr. Barron found a wealth of material for study. It has long since disappeared, and, like the baseless fabric of a vision, left not a wreck behind. Still also is retained the picture of the great vinery at Cumberland Lodge, Windsor Park. That picture shows it to us as it was many years since, and in its old habitation. Under Mr. Mackellar's régime all is changed. The old vinery and its brick flues have disappeared, a new house has been erected, and the grand old Vine is now in a condition of almost youthful vigour. We could well have wished that, in a book which is to be handed down to posterity as the great Vine book of this age, the text descriptive of the wonderful old Vine at Hampton Court had been brought up to date. That veteran now has a new house larger than its old one. It is in quite robust health, really a marvel considering it has been planted for some one hundred and fifty years. Each year it carries from 250 to 300 bunches of Black Hamburg Grapes that are so superbly finished and coloured as to be very difficult to excel. It has had a marvellous recovery from the weakness of old age, as has the Cumberland Lodge Vine. We would like to learn that so great was the demand for this most reliable and valuable book that the new edition was soon exhausted. Young gardeners who may wish to know of authoritative or reliable books may be assured they will find one in Archibald Barron's "Vines and Vine Culture." —D.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Rosa sinica anemonæflora.—This is particularly fine this season with its large silvery pink flowers. It is hardy, and does well when grown up tree stems and on the pergola. It is beautiful for cutting and table decoration. *Rosa L'idéale* is likewise a lovely early Rose and such a delightful colour; it is exquisite for cutting when grown on a wall.

Rosa altaica.—The variety *spinosissima* is a fine single early white for the shrubbery or Rose walk. This, the earliest of its section and being so hardy, is worth the attention of all lovers of our national flower. *Rosa sericea* and *R. s. pteracantha* are both useful and interesting four-petalled Roses of an early character, the latter having large scarlet, transparent thorns, which are pretty when the sun shines upon them.

The Chinese form of *Primula sikkimensis*.—This is one of the attractive plants which have delighted visitors to the beautiful rock garden at Kew, which has been looking very well this year, although the reconstruction which has been effected has prevented some plants from attaining their full development as yet. This Chinese variety of the Sikkim Cowslip is a more handsome plant, with larger flowers than those of its kinswoman, but apparently more closely clustered. They are of the same pleasing shade of yellow, and this Chinese form appears as if it would have a future before it, seeing that it also looks rather taller than *P. sikkimensis* as we usually grow it.

***Primula pulverulenta* Mrs. R. V. Berkeley.**—Lovers of the hardy *Primulas* could not have failed to admire this plant as shown by Messrs. James Veitch and Sons at the International Horticultural Exhibition. Those who observed it were practically unanimous in agreeing that it was one of the best of the new hardy plants in the exhibition, and that was saying a good deal. Its handsome stems, mealy, like those of *P. pulverulenta*, bore fine whorls of white flowers, touched with crimson at the base. If a pure seedling of *P. pulverulenta*, it shows the close relationship existing between that plant and *P. japonica*, as the whole plant bears an unusually strong resemblance to a white *P. japonica*, though in a glorified form.

***Pinguicula grandiflora*.**—Few people seem to grow the large-flowered Butterwort, although it is by no means a difficult subject where there is a moist spot in the garden, such as that in which *Primula rosea* will flourish. Even our native Butterwort (*Pinguicula vulgaris*) looks pretty in such a place with its violet flowers, but it is eclipsed in beauty by its ally, which has larger and brighter-coloured blue flowers. A nice group of this appeared in one of the rock gardens at the Chelsea exhibition, but it did not attract the attention it

deserved as a good group of a plant little met with in the rock garden of the present time. The fact of its loving a moist bog will commend it to those who are making a feature of a water and bog garden, and who wish to choose plants not too large and possessing all the charms of the finest of the alpine flowers.

Beauty of the Rocks.—This is the popular and well-deserved name given to *Draba pyrenaica*, a charming little alpine plant, native of the Pyrenees, and often called *Petrocallis pyrenaica*. It requires a very gritty soil, and thrives when packed between small stones, such as one would provide in a moraine garden. The flowers, rosy lilac in colour, are produced throughout the spring months.

National Hardy Plant Society.—The first exhibition of hardy plants and flowers under the auspices of the above society will take place in the Royal Horticultural Hall, Vincent Square, Westminster, on Wednesday, June 19. In addition to the classes set forth in the schedule, we learn that Messrs. Sutton and Sons are offering prizes for six bunches of Sweet Williams, both pink and scarlet. All communications respecting the show should be addressed to Mr. A. J. Macself, 52, Beechfield Road, Finsbury Park, London, N.

Tulipa Sprengeri.—This is still the latest of the Tulips to flower, and it comes in very usefully and pleasingly after the Darwins and other late flowers are over. It has not yet, apparently, given us a variety of colour, but the rich orange scarlet flowers with golden anthers are bright and showy. Probably it will some day prove the parent of a late-flowering race of Tulips, which would prolong the succession for a considerable time after the others had passed away. Sprenger's Tulip is about one and a-half feet high, and has the flowers of good size for the stature of the plant. It seems to be thoroughly hardy, though not increasing much by offsets, and flowers annually on rockwork and in the border.

An Uncommon Arrangement.—An exhibit in the big tent at the recent International Horticultural Exhibition at Chelsea, which attracted a good deal of attention from its unorthodox character, was an arrangement of *Statice profusa* and *Malmaison Carnations* from Mr. Leopold de Rothschild's garden at Ascott, Leighton Buzzard. The groundwork consisted entirely of dwarf, well-flowered examples of *Statice profusa* disposed rather thickly. Springing from this groundwork were fine clumps, each consisting of several plants, of three or four varieties of *Malmaison Carnations*, among which that popular variety, Princess of Wales, was very noticeable. The bed, in shape somewhat like an elongated crescent, was edged with *Isolepis gracilis*, a charming subject for such a purpose, though not used now to the same extent as it was at one time.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Narcissus Poetaz Orient.—I can endorse all that the Rev. J. Jacob says about this variety. It is a most charming flower to grow in pots, and is a wonderful laster.—H. G. H.

Rosa Hugonis.—This Rose has been very early with me this year; in fact, so early that the frost has destroyed quite half of the shoots, which were covered with buds, and I am afraid they will not break again. Is it supposed to be quite hardy? I have had it in my garden three or four years, and it has not before been affected by frost.—H. G. H., *Strode*.

Euphorbia Wulfeni.—I enclose a photograph of *Euphorbia Wulfeni*, which may interest your readers if you care to reproduce it in *THE GARDEN*. I have had it for four years, and this is the first time it has bloomed, and of the 2,500 different plants in my collection, none has caused greater interest and surprise to the hundreds of visitors who avail themselves of the opportunity of inspecting my alpine and herbaceous garden. There are no less than twelve spikes of bloom open.—ALBERT WOOD, *Sutton Coldfield*. [This interesting Spurge has been the subject of much correspondence in our pages. An illustration appeared in *THE GARDEN*, January 22, 1910. Unfortunately, the photograph sent by our correspondent is not suitable for reproduction.—En.]

Choisya ternata.—On page 250, issue May 25, of *THE GARDEN*, "A. D., Kingston," has a note on this plant as grown in the public gardens there, and expresses surprise at seeing such a fine specimen and its apparent hardness. I am quite sure that many readers would be similarly surprised, as it is regarded as a shrub only suitable for growing outside in very sheltered positions. If grown in firm, suitable soil, however, *Choisya ternata* will succeed in any open border in gardens south of the Midlands. Twenty-five years ago I had a cutting given me, which was rooted in due course and planted outside in a partially-sheltered position. The roots grew mainly under a path which was traversed more than any other in the garden, so that the rooting medium was a very firm one and not at all rich. In seven years the bush had grown many feet through and 5 feet high. It is a great specimen at the present time, notwithstanding the severe and frequent cutting back of the branches. It has flowered profusely, and never suffered in the least from frosts in that long period. It certainly deserves to be more extensively grown as a hardy flowering shrub than at the present time.—G. G.

— I venture to think this beautiful shrub is much more hardy than your correspondent, "A. D., Kingston" (page 250, issue May 25), seems to think. My garden is situated in a bleak spot in Cheshire, 250 feet above sea-level, exposed to heavy gales from the Irish Sea, and yet this evergreen blooms more or less every year, and is at present covered with bloom, although we had 20° of frost last winter. It is true we place mats round it in winter. It is 4 feet high and 5 feet through. I have another plant about half the size, and we have no difficulty in striking cuttings from it. I fancy there is too much hesitation in trying supposed tender evergreens in the North of England. For instance, *Olearia Haastii*, which Robinson says may thrive in favoured spots in the South, thrives in this neighbourhood, and never fails to bloom profusely

every year without any winter protection. I have more than a score of plants 3 feet and 4 feet high and 4 feet through. Even *Olearia dentata*, which is certainly more tender, has grown with me 5 feet high, and is covered with bloom in July. *Enrybia Gunnii* is more uncertain, though it has survived the winter, and is now blooming on all the points not cut by the frost.—S. A. D., *Noctorum*.

Geranium Hall Caine.—This variety is very showy and well worthy of special mention. The colour is salmon, and the inflorescences are borne freely on a bold, long axis. The individual flowers often measure 2 inches across and possess qualities of a very lasting nature; moreover, the foliage is large and ornamental, having a noticeable brown zone that is deepened by the application of soot-water. In my judgment it is one of the best *Geraniums* extant for greenhouse decoration.—GEORGE H. COPLEY, *Horton Park, Bradford*.

Manures to Deepen the Colour of Roses.—With reference to the paragraph on the third page (251), signed "P.," of *THE GARDEN* for May 25, I may mention that sulphate of iron (greenstone) has been found to effect this, as also to strengthen the scent. When in India, at Almera, Kumaon, U.P., in the early seventies, I used to experiment a little in this way, planting ten Roses of a similar variety in a row, separated from each other, and feeding them with different manures—burnt brick, sulphate of iron, horse, cow, goat, sheep, rabbit and poultry manure. The sulphate of iron always brought out a fuller and richer colour and scent, while the animal manures brought on the foliage. Wakeley's Hop Manure has a similar effect, deepening the colour of Roses, and also helps the plant generally. I got the idea of experimenting with manures from a manual on Indian gardening by a Madras Army officer whose name I have now forgotten.—H. G. BATTEN, F.R.H.S., F.N.R.S.

Horticultural State Honours.—It is greatly to be hoped that the honour of knighthood so fitly and so aptly conferred by His Majesty the King on Mr. Harry J. Veitch is but the prelude to others that may well be merited. Horticulture, so far, in its relations to the State does not seem to have obtained in the past the high position it deserves. There have been knighthoods given for distinguished botanical service; and, indeed, the one which pleased us all, the granting of that honour to Sir F. W. Moore of Glasnevin, was awarded more for botanical research than for horticultural status. But Mr. Veitch is a thorough horticulturist. Apart from being the head of the greatest nursery establishment in the kingdom, he is far more widely known as a great gardener and as a friend of gardeners; hence that widespread approval heard and the pleasure given. But the announcement made by Mr. Runciman at the jurors' luncheon of a probable intention on the part of the Board of Agriculture to establish a horticultural diploma opens up a wide prospect both of honours and of anticipations. But to myriads of great and good gardeners there is a large fly in that State pot of ointment. It is in the form of examination tests which seem to be foreshadowed. Other than the splendid work they have been doing for horticulture all their lives, what better test is needed as to the merits or fitness of those able men, many of whom have passed into the serene and yellow leaf of life and could not pass a paper examination as young, inexperienced, but well coached, students can? Fancy putting to the test of a paper examination

on Orchid culture the grower of that magnificent group of Orchids staged at the great show from Westonbirt! Who will test the knowledge in fruit culture of those great gardeners who figured so finely also at that show? To attempt any such test would be utterly absurd. If a State diploma be established, awards must be made on the basis of work done rather than on a written test. In the case of young candidates who have so far no work to show, their admission to the diploma must be only after severe examination tests—first, scientific, and, second, practical. A wide knowledge of entomology and mildews is most valuable; but the good, capable cultivator who fights these enemies with high-class culture and good treatment is generally the better gardener. There are other ways, however, than through the State that honours may be given to men who have done good work in gardening. Sir George Holford at the jurors' luncheon illustrated that method in the public way he complimented his able Orchid-grower, Mr. H. G. Alexander. Why should that incident be so singular? How few great employers, gentlemen or traders, have previously done so much, and yet pages of *THE GARDEN* could be filled with the names of men who in private work and in trade have rendered to horticulture magnificent service; indeed, it is they by their skill, their industry and hard labours who have made our beloved vocation what it is. What an army of these there are who have over and over again earned their proposed diplomas!—D.

Varieties of *Leptospermum scoparium*.—Although visitors to the recent Royal International Exhibition on the look-out for the more gorgeously-coloured subjects might have passed it over without notice, yet to many one of the most interesting exhibits in the large tent was a group of three distinct varieties of *Leptospermum scoparium*, shown by the Rev. A. T. Boscawen, Long Rock, Cornwall. The typical *Leptospermum scoparium* is a native of Australia and New Zealand, and in both cases it covers considerable tracts of country. In New Zealand, where it disputes the right of way with the common Bracken, it is said to vary in height from 1 foot to 20 feet, and during the flowering period from November to January it is very handsome, but when out of bloom the greyish green of its foliage forms a monotonous feature. In this country it is a delightful shrub for particularly favoured spots in the West, but throughout the greater part of England it can only be regarded as an ornamental subject for the greenhouse or conservatory. Botanically, it belongs to the same family as the Myrtle; but though the leaves have somewhat of the aromatic fragrance common to the genus, yet it is far less pronounced in this than in many others. The leaves have before now been sometimes used as a substitute for tea; indeed, this *Leptospermum* is often known as Captain Cook's Tea Plant. Of the three varieties above alluded to, the most striking is *Nichollii*, which was illustrated in *THE GARDEN*, page 264, and was given a first-class certificate by the floral committee. In this, instead of the flowers being white or nearly so, as in the typical kind, they are of an intense ruby red colour, a tint quite startling to one accustomed only to the light-coloured forms. The second variety, *Chapmannii*, is of more upright growth than the others, while the flowers are of a rosy red hue. In the third, *Boscawenii*, the plant is unusually loose and graceful in habit, while the comparatively large flowers are almost white with a red centre, the buds being bright red.—H. P.

Salvia splendens Pride of Zurich.—The day is not so very long past when *Salvia splendens* was chiefly regarded as a flowering subject for the embellishment of the greenhouse or conservatory during the autumn months. With the advent of some dwarfier forms, of which *Pride of Zurich* is one, this is all changed, and now for the last two or three years it has, at the meetings of the Royal Horticultural Society, figured among the spring flowers. At this season it is very bright and effective, but its greatest value is for bedding out during the summer months, at which time its brilliantly-coloured flowers form a notable feature. It is also of considerable service for greenhouse decoration. Seeds of some of the varieties are occasionally offered; but for freedom of flowering in a small state I much prefer to strike them from cuttings, which in a gentle heat will root in a very short time. My experience of seedlings is that they are more liable to run up during their earlier stages than those propagated from cuttings.

Shrubby Marigolds.—The immense Composite Order is freely represented in South Africa, of which continent the various species of *Arctotis*, or *Shrubby Marigolds*, are native. They were especial favourites of that enthusiastic plantsman, the late Mr. W. E. Gumbleton, whose collection contained some unique forms. As it is, they are difficult to obtain from nurseries, the most generally met with being *Arctotis aspera* and *A. aureola*. Of these I prefer the last-named, the flowers being about four inches across, with the spreading ray florets of a rich orange yellow colour. In *A. aspera* the florets are of a pale yellow or straw colour, with a deep yellow disc. The "Dictionary of Gardening" gives 1710 as the date of the introduction of both of these species, yet, pretty though they are when in flower, they are rarely seen. The nomenclature of the entire genus is considerably involved, for in some cases at least authorities agree only to differ with regard to the correct names. Their cultural requirements are not exacting, as they need much the same treatment as a *Pelargonium*.—H. P.

A Little-Known Rock Garden

Plant.—The fine little plant *Erodium pelargonifolium* is but little noticed in horticultural works at the present time, and the question of its hardiness is worth some consideration, as it is now coming into bloom, and is one of the finest rock garden plants, with its white flowers prettily marked with purplish crimson. Both in flower and leaf it has a considerable resemblance to the old *Pelargoniums* which were so popular for growing under glass and are still prized by many. It is totally unlike the other *Erodiums*, and is a handsome rockery plant, making a good trailing bush of considerable effect and of much real beauty. It is, however, a

plant which requires some care with me, also with a considerable number of others who have tried it. It appears to require occasional propagation, either from seeds or from cuttings, and the latter method is the more convenient, as the seeds may be forgotten when ripe, while cuttings can be taken at practically any time in summer and strike easily, just as one would strike a *Zonal Pelargonium*. The difficulty lies in keeping old plants, as, while a young one will stand the winter well in most cases, a larger plant will die. It is, therefore, almost essential to keep a plant or two in a frame if *E. pelargonifolium* is not to be lost. It apparently delights in a warm, dry soil and a

SIR HARRY J. VEITCH, V.M.H.

THE honour of knighthood that has fallen to Mr. Harry Veitch is as popular as it is well deserved, for there is no man in the gardening fraternity more worthy or better fitted to adorn the rank to which he has been called. His energies towards the success of the recent International Exhibition are well known, and merit the sincere thanks of all horticulturists and thousands besides. The honour is more than a personal one, for it is a tribute to British horticulture and a fitting commemoration to an eventful year. Sir Harry's long association with the advancement of horticulture in this country is a matter for general admiration, and his experience of International exhibitions is unique. When it was determined to hold the great International Horticultural Exhibition in 1866 in London, he entered with zest into the work as one of the general committee. At the Continental gatherings during the past forty years or so, Sir Harry has been a constant visitor, and it is of special interest at the present time to observe that he was present at the first International exhibition ever held in Russia, this occurring at St. Petersburg in the spring of 1869, when the party, among whom were Sir Joseph Hooker, Dr. Robert Hogg, Dr. Moore of Glasnevin and Mr. Robert Warner, were cordially welcomed by the Czar.

Sir Harry J. Veitch was born on June 29, 1840, at Exeter, and received his education at the Exeter Grammar School and in Germany. He afterwards attended the course of botanical lectures given by Dr. Lindley at the University College, and gained an insight into the working of the seed department of the business which he was soon to manage in the establishment of Messrs. Vilmorin at Paris. Sir Harry is known for his splendid business capacity and his untiring energy in promoting good work. It is well over fifty years ago since he commenced his duties in the Chelsea nurseries, and to-day throughout the world wherever horticulture has gained the affections of the people the name of Veitch is honoured.

It seems almost unnecessary to write of his love and devotion to the Gardeners' Royal Benevolent Institution. Moreover, he is an active supporter of the Royal Gardeners' Orphan Fund, and has been closely associated with its good work from the commencement.

Many are the tokens of the esteem in which Sir Harry and Lady Veitch are held by those with whom, during a busy and happy life, they have been brought into contact. That they may live for many years to enjoy their well-deserved honour is the sincere wish of their numerous friends at home and abroad.



SIR HARRY J. VEITCH, V.M.H.

sunny place, where it soon attains some size and looks remarkably pretty.—S. ARNOTT.

FORTHCOMING EVENTS.

June 10.—United Horticultural Benefit and Provident Society's Committee Meeting.

June 12.—Royal Cornwall Show at Penzance (two days). East Anglian Horticultural Society's Meeting.

June 16.—Royal Horticultural Society's Meeting and *Gladiolus* Show. Lecture by the Rev. Professor Henslow on "Professor J. S. Henslow as Ecologist."

TREES AND SHRUBS.

HARDY SHRUBS WITH PEA-SHAPED FLOWERS.

I NEVER remember seeing the Wistarias quite so good as they have been this season. Even the old forms were larger and more beautiful than ever. Those growing on the mansion and on south walls and those trained up tripods were beautiful in the extreme. Some time since they were planted on a train over large trees, where they look most beautiful and are always effective. The frost in April took some of the blooms, but did not do much damage; it simply thinned them to make the remainder all the stronger. When associated with Laburnums they are glorious, and trained along the top of a high wall and the top fringed with the blooms it is really a marvellous sight. These plants like a little assistance when planted near large trees, and the roots of the trees should be kept as clear of them as possible. There are some marvellous specimens about the country, but they are very often in out-of-the-way places. My employer has told me that he knew of one fine plant which was nearly a quarter of a mile long, trained over the mansion and around all the garden walls. The newer variety, *multijuga*, has much longer racemes of flowers, and is very handsome.

The Brooms.—At this season the Brooms are very handsome garden subjects, especially *Cytisus præcox*, *C. p. alba* and *C. andrea*. Then there is the Madeira Broom, *C. virgatus*, which makes a fine tall plant and flowers later, generally at its best in June; this is an evergreen. *C. nigricans*, the summer-flowering type, flowers in July and August. Then the old common Broom, *C. scoparius*, is very fine in its season. *C. schipkaensis*, a dwarf grower, with creamy white flowers, is a fine dwarf plant and a good one when grafted on a stock 4 feet or 5 feet high. *C. kewense*, a dwarf, trailing variety raised at Kew, is very pretty and bears its creamy flowers freely in May. *C. Bearii*, with its bright yellow flowers, is also an attraction. *C. Ardoinii*, a very pretty species about four inches high, forms a mass of golden flowers in April.

Genistas.—*G. prostrata* is a very pretty and useful plant for bare spaces on account of its trailing and spreading habit, and only grows a few inches from the ground. *G. monosperma*, a rare species with white flowers, is inclined to be somewhat tender; this should always be planted in a warm and sheltered spot. *G. hispanica* is a rare free-flowering species and a good grower. *G. horrida* makes a fine plant, and has sharp-pointed leaves. *G. decumbens*, a very pretty trailing variety, is suitable for the alpine and rock garden.

G. tinctoria, a dwarf, compact, creeping plant, bears orange flowers in July and August. There are many more forms and varieties, but I have given enough to show their extreme usefulness.

The Rose Acacia (*Robinia hispida*).—This is among the most beautiful of all flowering trees and shrubs.

Cæsalpinia japonica is another most beautiful shrub.

The Honey Locust (*Gleditsia triacanthos*) is also very beautiful and well worth growing.

flowers. These trees, when used for planting extensively, are very effective. If used alternately with such trees as Copper Beech, *Prunus Pissardii* or trees of that character, a wonderful contrast of colour is produced. There are no trees capable of greater effect if planted in bold groups or by the hillside, water-side, park drive or avenue; in fact, one can scarcely plant these trees in the wrong place.

Desmodium penduliflorum is a very pretty Japanese shrub with wand-like, gracefully arching shoots which grow 5 feet to 6 feet long, and are clothed with large leaves and bear panicles of reddish purple, Pea-shaped flowers in August and September, when few shrubs are in flower.

W. A. COOK.

Leonardslee Gardens, Horsham.



SPRAY OF A BEAUTIFUL TREE (*EDWARDSIA GRANDIFLORA*) BELONGING TO THE PEA FAMILY.

Judas Tree (*Cercis Siliquastrum*) is a very old introduction and still one of the most lovely. It grows into a tree 30 feet high, and bears rosy purple flowers in great abundance along the branches before the leaves appear. It is in flower now and most attractive.

***Edwardsia grandiflora* (syn. *Sophora tetraptera*)** is a most beautiful plant for a wall, and few things are better. See illustration. Then we have the very handsome

Laburnums, which are particularly showy, to say the least, especially the variety *Vossii*, which has very long trusses of rich pale yellow

KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Scarlet Runners.—This is one of the most important crops of the vegetable garden, but its full value is not usually appreciated until the bulk of the Green Peas are passing, or have passed, their best. With a view to ensuring heavy crops on plants full of vigour late in the season, the seeds ought not to be sown at the middle of May, or even earlier, as many amateurs do, but during the first week of the present month. The soil is warm, and it can easily be made pleasantly moist, if it is not in that condition naturally; there is no danger of late frosts causing a more or less severe check; and the plants, therefore, have every inducement to go straight ahead to profitable bearing. It is necessary to provide a rooting medium which is at once deep and in excellent heart, and the seeds ought to be set at distances varying from 5 inches to 12 inches asunder, according to the variety, on a firm, level base about two inches beneath the surface of the ground. At the end of each line have a clump of a dozen seeds or so, from which plants can be drawn to fill gaps that may occur in the rows. Abundance of space goes for excellence of quality, bulk of crop and longevity of production in the plants.

Outdoor Tomatoes.—One would hesitate to recommend the planting of Tomatoes in the open quarters of many gardens for a week or ten days yet; but when they are intended for positions against warm walls or fences, the sooner the work can be done the better. It is then by no means difficult to provide protection, should the necessity for it arise, but this cannot always be managed in the open garden. In either case it is essential that the soil shall be in perfect mechanical condition, and that it shall contain readily available food; but the incorporation of fresh manure must be done with great judgment, or the plant

will rush to leaf growth at the expense of flower and fruit production. It is much wiser to give a really good, plain soil to start with, and feed as may be deemed wise or desirable when the roots are properly established. Each plant for outdoors should carry a truss of fruit and a truss of flowers when the planting is done to ensure the best returns.

Plants in Seed-Beds.—There will be a few thousands of plants in seed and nursery beds just now, and it is essential to the successful cropping of the garden in the winter that these youngsters have every inducement to make strong, sturdy, stocky growth. To allow them to become so crowded that they grow up into leggy, ungainly examples is an error that positively must be avoided, since such specimens can never make splendidly profitable plants when the call is on them next winter and spring. Therefore thin them out and transplant them to other positions immediately they demand more space, and see to it that they never suffer through lack of food owing to the soil about their roots becoming as dry as dust. No weeds ought to be tolerated in the seed or nursery beds, because they rob the plants of light and air as well as food.

Vegetable Marrows.—These ought to be placed in their permanent positions as soon as possible, as they demand a considerable time to grow into the fruiting stage. They are often put on heaps of soil or manure, and provided they do not grow too rampantly, they then occupy places where nothing else would crop. Or a hole can be taken out, filled with manure and surfaced with a good dressing of sweet soil, and the planting can be done on the slightly-raised summit. The bush varieties should be far more extensively grown in small gardens, as they bear magnificently and do not demand a serious amount of space. Seeds pressed into the soil now, if it is fertile and in good condition, will grow and fruit well in due course.

Hoing.—The Dutch or draw hoe ought to be incessantly at work in the vegetable quarters from now onwards to the end of the growing season, and those who neglect it may rest assured that they will lose a substantial proportion of the value of the food which has been worked into the ground for the benefit of their crops. It is impossible to hoe too much, never, of course, attempting it



ROCK GARDEN EXHIBITED BY MR. MAURICE PRICHARD AT THE RECENT INTERNATIONAL SHOW.

when the surface is wet. Weeds not cut out by the hoe must be removed by hand. H. J.

THE ROCK AND WATER GARDEN.

ALYSSUMS IN THE SPRING GARDEN.

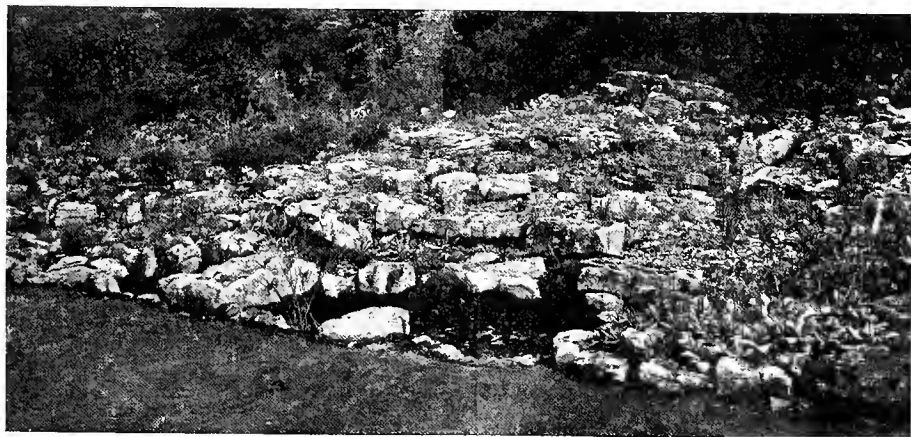
THE genus *Alyssum* embraces a group of plants that combine beauty and utility in a marked degree and are more or less indispensable in every garden. The colour range is restricted to yellow, as those having white flowers are not important enough from the garden aspect to merit attention. Curiously enough, this genus supplies a colour deficient in *Aubrietia* and *Arabis*, with which it is commonly employed in the rock garden; hence it is apparent how important *Alyssums* become in this floral tripod. Although chiefly alpine in character, *Alyssums* readily adapt themselves to ordinary conditions in gardens, always succeeding best in hot, sunny exposures such as the rock garden offers; they are also most satisfactory subjects for dry walls, where the growths have every opportunity of becoming ripened under the concentrated power of the sun's heat. They are not particular as to soil, provided it is light, well drained and contains a fair percentage of lime, as under these conditions growth is always

most satisfactory and the floral display is well assured.

Propagation.—All the species and varieties are easily propagated by seed or cuttings. The former may be sown as soon as ripe, or may be deferred till spring, using shallow pans and sandy soil, transplanting the seedlings into pots or boxes when large enough to handle. Artificial heat is never necessary. An ordinary greenhouse in which to germinate the seed and an unheated frame in which to stand the seedlings are valuable aids towards early propagation, although equally good results may be obtained by sowing late in an ordinary garden frame. *Alyssum saxatile* and its lemon-coloured form are both largely employed in spring bedding arrangements, and where a large quantity is required it will often be much simpler to dispense with pots and transplant the seedlings direct into boxes, afterwards transferring to a nursery bed in the open. If carefully lifted in autumn, little or no check is occasioned the plants, as owing to double transplanting in the early stages an excellent fibrous root system is developed.

Cuttings may be used with equal success. They are best taken when the current season's wood begins to harden, towards the end of June or early July. The cuttings are inserted in sandy soil in a hand-frame and kept close till such time as roots are formed, afterwards transplanting to pots or boxes, as is most convenient.

The Best for the Garden.—*A. saxatile* is the best-known species. It makes a vigorous, rounded bush up to 18 inches in height. The flowers are borne in close, branching beads of a rich buttercup yellow, and are produced in the greatest profusion, so that even a single plant becomes a most conspicuous object when in flower. The leaves are lanceolate, entire and of a hoary grey green, while the stems are woody at the base. Of this species there is a double form, dwarfier than the type, with flowers resembling small double rosettes. It is a first-rate rock plant, and remains in flower from April till June. The variety *citrinum* is one of the most effective colours in the spring garden, the flowers being of a delicate lemon or sulphur tint. In other respects it resembles the type. There is also a form having the foliage prettily variegated with creamy white, the colouring being best developed when planted in full sun. It is most useful for contrast, and is greatly favoured in carpet-bedding and similar arrangements. *A. alpestre* is a typical alpine species, forming neat, rounded tufts of hoary leafage that in May and



MR. J. WOOD'S ROCK GARDEN FROM BOSTON SPA AT THE INTERNATIONAL SHOW.

June become almost hidden by the wealth of rich yellow flowers that burst from the tiny stems. It is a dwarf subject, and rarely exceeds 3 inches in height.

A. montanum is more prostrate in habit than the last-named species. The stems and leaves are hoary green, the former terminating in simple racemes of bright yellow flowers that are freely produced in May and June. This and the previous-named species are ideal plants for any old wall, as if once established they live to a great age, never failing to flower in their appointed season.

Coombe Court Gardens. THOMAS SMITH.

THE DRIPPING WELL AT KEW.

VISITORS to Kew Gardens on passing through the rock garden cannot fail to notice the dripping well. It is a cool retreat, suitably furnished with rock and water-side plants. A slight fall of water

THE ROSE GARDEN.

ROSE BLANC DOUBLE DE COUBERT.

THIS charming Rose is ever welcome, for it is the first to yield its blooms, which are quite dazzling in their snowy purity. I had a fine standard of it on May 29 in full bloom, and near by are arches of Carmine Pillar just unfolding, which tend to accentuate the pure whiteness of the rugosa Rose. To see this Rose in perfection one must grow it as single bushes or on standards and half-standards, but it also makes a fine hedge. I admire the Blanc Double de Coubert more than the single white, although this latter is very beautiful, and, of course, has the good quality of giving us fine showy fruits in the autumn, which Blanc

charming Roses that possess so weak a constitution that they cannot fail to disappoint the average grower who is not aiming for one or two flowers only. Of course, with the vast number of varieties now grown, no catalogue or list can give much fuller descriptions than at present, and we can scarcely expect the vendor to lay any emphasis upon qualities not eminently desirable.

It is my purpose to note a few of the varieties I could not recommend to any small amateur grower. No elaborate description of the bloom itself comes within the province of this article, and while I by no means wish to malign the varieties, it is well to know a little more of their characteristics of growth and flowering. Duchess of Bedford is a grand Rose for the exhibitor, especially when he can afford to bud his own Briar stocks and cut from maiden plants. But I find it by no means a good Rose to transplant, and in most places it is weak and short-lived after the first season. Gustave Piganeau, Alfred K. Williams, Comtesse de Ludre, Louis van Houtte, Reynolds Hole and Xavier Olibo are other truly beautiful Roses among the Hybrid Perpetual class that have much the same characteristics as Duchess of Bedford.

Another class of growth is found in the same section that, while not dwindling away in a similar manner, are usually too short and stumpy in growth to please. Nor can a short, stumpy growth possibly produce any quantity of flowers, and there can be little object for the small grower to have either of those named when there are numbers of good growers and free bloomers closely resembling them in all other respects. I will name Etienne Levet, Ulster, Marie Verdier, Marchioness of Downshire and Merveille de Lyon as examples.

Roses with Slender Stems.—Yet a third class can be taken from the Hybrid Perpetuals, and they are those with a persistent drooping habit, and generally carrying heavy flowers upon stalks and growths far too slender to support such a burden. Consequently, one has to expend a lot of time in tying up the growths, or the blooms are entirely spoiled by earth splashing. Earl of Dufferin cannot be dispensed with in a large collection, but the buds are of immense size and substance, needing a long time to develop. I have frequently had it extra good during a warm season; but it always droops and is of little service unless great care be taken, and then only when cut and the flower supported in some way. Gloire de Margottin, Camille Bernardin and Marie Baumann are further examples. The only phase of culture suitable for a drooping flower is upon tall standards, pillars and walls. Then one can see into the depth of the flower; but, unfortunately, this habit of drooping means much greater attention in culture. Hitherto the Hybrid Perpetual section is the only one dealt with, but other sections possess varieties with precisely the same undesirable characteristics. To take the Teas and Noisettes first, I will name a few that are constitutionally too weak to throw many flowers, and so generally die out, to the bitter disappointment



AN ESTABLISHED DRIPPING WELL IN THE ROCK GARDEN.

trickles down between the rocks and collects in a pool, whence it takes the form of a little stream. As may be seen from the illustration, this stream serves to supply such plants as Wood Lilies (*Trilliums*) and Globe Flowers (*Trollius*), both of which are in flower, with the requisite amount of water. The surrounding rocks are suitably planted with ferns and Saxifrages, while hold clumps of the perennial Candytuft (*Iberis sempervirens*) create a fine display all through May and in early June. At no time is this delightful spot devoid of interest, and it is here, in damp but well-drained soil, that Soldanella—the daintiest of all alpine plants—looks almost as happy as it does in its mountain home. It might here be mentioned that the whole rock garden at Kew is so constructed as to appear like the rocky course of a mountain stream. Such streams often dry up in winter, and are bounded by rock-piled banks, amid the crevices of which a copious summer vegetation springs up.

Double de Coubert does not. I would suggest to anyone who would like a good contrasting bed of Roses for early June flowering to plant this variety as half-standards, with the crimson Mrs. Anthony Waterer beneath. Such a bed well isolated would be a most beautiful feature in any garden.

ROSES UNSUITABLE FOR SMALL GROWERS.

UNFORTUNATELY, we have several varieties of Roses—and these among the most beautiful as individual blooms—that are decidedly unsuited for the grower with little space or cash. I do not think there is enough note made of this suitability or otherwise, and far too often the flower itself is dwelt upon minus any definite remarks about its adaptability to the needs of the small grower. Some Roses are certainly more shy-blooming than others, even when grown by the most experienced. Then, again, there are not a few

of the small grower, who has probably obtained the variety after seeing a grand specimen in the exhibitor's box. I remember the glorious flower of Cleopatra exhibited at Windsor many years ago. The reverend gentleman who grew it noticed me taking its dimensions, and, after seeing how surprised I was, told me he thought I should be even more surprised if I could see the plant (?) he cut it from, for, said he, "that is all there was of it!" As a rule, Cleopatra is small and with long buds. Of course, the plant alluded to was thinned out to one bud only, and, being upon an extra vigorous growth for this variety, gave an abnormal bloom.

But few small growers can afford to grow upon these lines. Mme. Cusin, Mme. de Watteville, Golden Gate, Ma Capucine and Niphotos are others that may be classed with these. The thinner and softer petals among the Teas and Noisettes often make the blooms difficult to open, the petals rotting before the centre has developed. Jean Ducher and Etoile de Lyon are examples.

Among the newer section of Hybrid Teas we find several that are only fit for the exhibitor's box, and then solely when a large number of distinct varieties are wanted. Lady Mary Fitzwilliam, Mildred Grant and White Lady certainly produce wonderful flowers, but there are so few of them and they are bad growers. Others in this section that I cannot recommend for general culture are Bessie Brown, Queen of Spain and Ernest Metz. Neither can be relied on. A. P.

ROSE MME. MAURICE DE LUZE.

It is not many of our present-day novelties that can truly be claimed by the exhibitor as well as by those who desire to decorate their gardens. But such is the case with the Rose illustrated herewith. Without a doubt it is one of the best M. Pernet-Ducher has given us, and this is saying a good deal. Its large, deep rose pink blooms have a wonderfully clear hue about them, and this is much accentuated by the beautiful bold petals—like huge shells. Then, too, the fragrance is delightful, of that unctuous sort that is so refreshing. It is a bushy grower, not rampant, but compact, and it would make a nice, even bedder, one that would yield plenty of superb blooms upon good, erect growths. M. Pernet-Ducher in 1907 sent out three really fine novelties, one of them the above-named Rose, one Laurent Carle, and the third Mrs. Aaron Ward, and all three have established themselves quite securely in our collections. P.

THE FLOWER GARDEN.

THE VIOLETTAS.

[See coloured cover.]

THESE miniature-flowered Tufted Pansies are essentially plants for the rock garden, where, provided good soil and an adequate amount of free root run are assured, they invariably do very well. To the late Dr. Charles Stuart of Chirnside, N.B., belongs the credit of having raised the first Violettas. In 1874 he succeeded in crossing Pansy Blue King

SWEET PEA NOTES.

Vases for Exhibiting.—If the stock of vases which will be required for the fast approaching show season has not yet been overhauled, it is imperative that it shall be put in hand forthwith. It is inevitable that a few will be broken or lost each season, and nothing is more irritating when one is putting together the many things for an exhibition than to find that there is a shortage of vases—one might almost as well find one's self short of excellent flowers. Many growers adhere

strictly to a particular pattern of vase, and the system has much to commend it, since one knows precisely what is wanted to fill it to the best effect. It may, however, cause more than ordinary trouble, because one seldom lives within a stone's throw of the emporium from which the chosen pattern can be purchased; hence the paramount importance of a close inspection of all in hand a few weeks before the actual time of use, as one can then easily procure the requisite new ones to complete the set and leave a few over for casualties.

Material for Shading.—

Perhaps what is known as butter muslin is the most popular of all materials for this purpose; but whatever may be utilised must be inspected at once with a view to seeing whether there is sufficient in hand for the season, and if it is in sound condition. The work of examination will not occupy many moments, and if it is ascertained that the quantity is short or that the material is worn out, a supply ought at once to be procured. A safe rule is to buy enough to shade all varieties in which orange shows in the colour, although we know from interested descriptions that none of these now burns, and to have some over in case it should be deemed wise to protect scarlets, crimsons and other shades susceptible to injury by the sun.

Boxes for Packing.—These are another commodity with which the exhibitor must make absolutely certain that he is fully equipped. Old hands in the show arena know, often from painful and expensive personal experience, how dangerous it is to rest content in the idea that any boxes will answer the purpose, and that there must be plenty lying about the place ready to be picked up the second they are wanted. The man who desires or determines to be on the safe side will turn out all the boxes that can be found, put on one side those that are in suitable condition and have properly-fitting lids, and throw the remainder away



A BEAUTIFUL HYBRID TEA BEDDING ROSE MMÉ. MAURICE DE LUZE.

with Viola cornuta of the Pyrenees, and the progeny of this interesting cross gave us many most pleasing variations. In 1887, among a batch of seedlings, there appeared a lovely white blossom of miniature proportions and distinctly sweet-scented. This plant was named Violetta. Half-a-dozen good varieties are Lavinia (blush lavender), Gertrude Jekyll (rich yellow and primrose), Violetta, Diana (primrose), Eileen (blue), and Grace (pure white with neat yellow eye). All Violettas are rayless and sweet-scented. Rock Yellow is a more recently raised rich yellow sort. D. B. CRANE.

or use them for some other purpose. Then the selected ones will be again looked over, even more carefully than before, and, doubtful starters, will be instantly discarded and consideration given as to whether those which remain will answer all the demands that may be made upon them; if not, an additional supply will be bought at once.

Name Cards.—It is the rule at most exhibitions, though it is all too common to see it honoured in the breach rather than in the observance, to say that all varieties shall be correctly labelled. It is the proper thing, and if it were made compulsory at all shows, irrespective of what the produce might happen to be, the educational value of such gatherings would immediately increase by more than fifty per cent. Sweet Pea exhibitors are not, generally speaking, as great sinners of omission as many others in this respect; but even among them there is room for improvement. In classes provided by seed merchants, cards already printed are gladly supplied free of charge by the vendors of the seeds; but in other instances plain white cards ought to be in stock for use as required. The varieties selected for a special show will have their names inscribed neatly and legibly on the cards, and a few spare ones will be taken with the reserve bunches in case an alteration is deemed wise at the last moment.

Surface Cultivation.—There is no more important detail in Sweet Pea culture than this, and I would impress upon my inexperienced readers the desirability of running the hoe through the surface of the soil between the lines at every opportunity which presents itself when the ground is dry. Keep on a covering of dust 1 inch or 2 inches in depth and it will prevent waste of food, and therefore act in some degree as well as a mulching of manure. Near the plants, if one is shy of hoeing, prick over with a small fork mounted on a long shaft.

HORACE J. WRIGHT.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

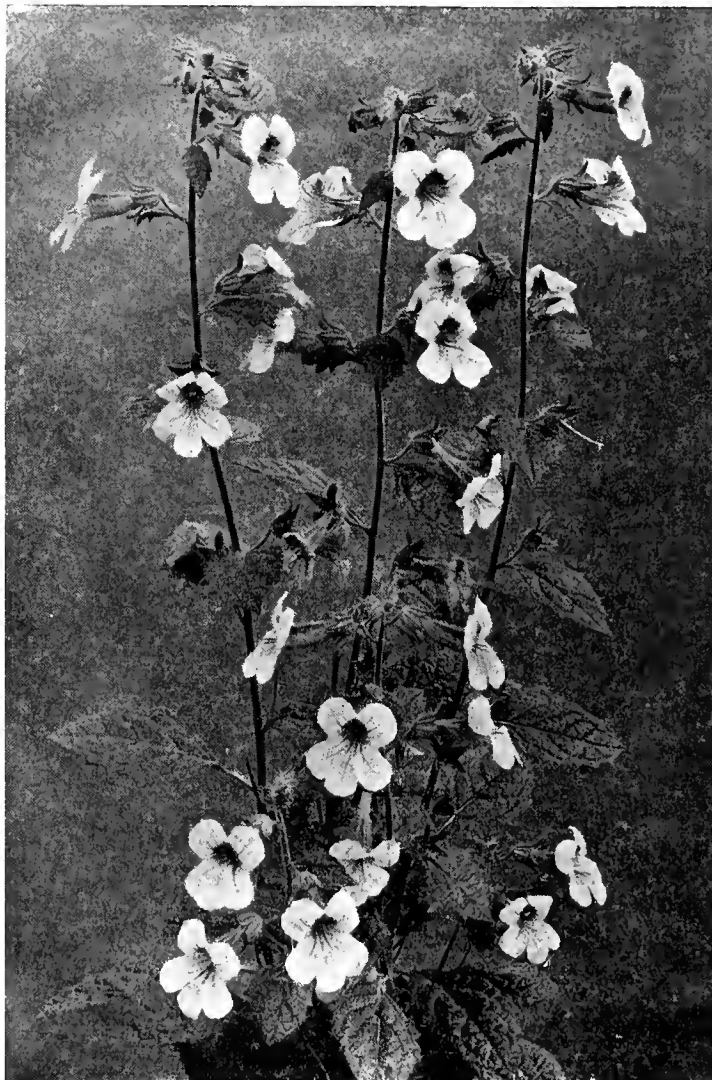
Early-Flowering Border Varieties.

—The value of these, both for border embellishment and the supply of cut flowers, is very great. Their flowers develop in the open air, there is no need of glass-houses for their accommodation, and so amateurs find them of much use. As the majority of the sorts are dwarf-growing and of sturdy habit, there is not much trouble entailed through staking. In rather poor or sandy soil Chrysanthemums do very well if grown in partial shade. The stems are drawn up a little more, it is true, but they retain nice green leaves and the flowers are richer in colour than is the case when the plants are grown in such soil in the scorching sunshine. So amateurs in town and suburban gardens should not hesitate to grow a few plants.

Planting Out.—If the plants are to be grown in different positions in a herbaceous border, it would be advisable to plant them in groups of three, five, seven, or even a dozen. On no account must they be overcrowded, and the groups should be composed of distinct varieties, one in each. The soil should be dug deeply and made moderately rich with rotted manure. If worked while in a fairly dry state, the soil should be made firm again before the plants are put in; then the shoots made will be strong, mature and bear flowers freely. The best effect is obtained when

feed the plants judiciously. Give them weak doses of liquid manure at every alternate watering and a pinch of some approved chemical manure to each pot. If the swelling of the stem is arrested, the sap-vessels are much contracted and they never really become normal again, so that the flowers do not attain that large size which characterises those on plants grown without check right through the season. The final potting of the plants intended for exhibition and greenhouse or conservatory embellishment must be done without delay. Late potting often results in the

wholesale damping of the flowers in the autumn. As there is not time for the roots to well fill the pots before the buds are "taken" and feeding commences, the result is damping of the flowers through the soil getting into a bad, sour state inimical to healthy root-action. Two plants may be placed in an 11½-inch pot, one plant of a strong-growing variety in a 9½-inch pot, and one plant of a weaker-growing variety in an 8½-inch one. Plants rooted in April and grown on single stems confined to bearing one flower for exhibition or grouping purposes should be finally potted in 7½-inch pots. These plants require very careful cultivation. They must not be allowed to become pot-bound, but placed in their flowering pots by the end of June at the latest. If any varieties have not made natural breaks by June 20, the plants must be stopped then, and only early-flowering sorts will bear fine blooms from such late breaks. AVON.



REHMANNIA KEWENSIS, A NEW HYBRID PLANT FOR THE GREENHOUSE.

THE GREENHOUSE

A NEW HYBRID REHMANNIA.

(R. KEWENSIS.)

HYBRIDISING, it has been said, is "a game of chance played between man and plants," and it certainly appears to

have been the element of chance that induced the hybridist to cross two very ordinary-looking plants such as *R. Henryii* and *R. chinensis*. These two species are the parents of the new hybrid. *R. Henryii* is a comparatively recent introduction from China, a dwarf-growing plant with dingy,

whitish yellow flowers. *R. chinensis* is perhaps better known as *R. glutinosa*, and is very little improvement, so far as appearances go, upon the other parent. The hybrid, however, shows a very decided advance over both parents. Its upright habit, branching from the base, is clearly portrayed in the accompanying illustration, while its large Foxglove-like flowers at once attract attention. The colour is creamy white or very pale yellow, each flower having a conspicuous crimson-maroon blotch on the upper segments. This hybrid has been raised at Kew, and for greenhouse or conservatory decoration it is likely to prove an acquisition.

only a few varieties, about six, or at the most nine, are grown in a border. The effect is much better than when single or isolated plants are put in representing many varieties.

Feeding and the Final Potting.—I know it is a fact that some cultivators are afraid to feed a Chrysanthemum plant before it has filled the pot with roots after the final potting or before it has had its bud "taken." It is not always convenient, however, to pot the plants just when they need it, and if this work be put off at all unduly, the growth of the plants will be retarded. Now, instead of allowing this to happen, the cultivator should

GARDENING FOR BEGINNERS.

CURRENT WORK AMONG THE RHODODENDRONS.

RHODODENDRONS are flowering with remarkable freedom this year, and before long their glory will have departed. Those who care for the future well-being of their plants should not omit to remove all the trusses of dead and dying flowers, and thus prevent them from seeding, for it should be borne in mind that the production of seed is a strain upon the plants. The observant man knows that Rhododendrons flower far more freely the following year if the undeveloped seed-pods are all picked off.

Colour-Schemes.—No plants lend themselves to colour-schemes so well as the Rhododendrons, and during the flowering season one should make a note of those varieties in which the colours enter into perfect harmony. Unfortunately, one too often meets with the common purplish Rhododendron *ponticum*, whose one great attribute lies in the fact that it is the only shrub never injured by hares and rabbits. It undoubtedly is a capital covert plant, growing well under trees, thriving in almost any soil and situation, and transplanting with perfect freedom; but why it should be so perpetually given a prominent place in ninety-nine gardens out of every hundred where Rhododendrons thrive it is hard to imagine, seeing that we have a host of varieties of pleasing hues to select from. The variety *Pink Pearl* is, beyond doubt, one of the most beautiful in cultivation, although it has been a little irregular in flowering; at all events, in suburban gardens. *Kate Waterer* is a rosy crimson variety with a large yellow mark; it always comes in for a fair share of admiration and never fails to flower well, while *Smithii album*, a clear white, heavily spotted, is, in the writer's opinion, the best white in cultivation. Other good varieties are *Alice* (rose pink), *Boule de Neige* (white), *Cynthia* (rosy crimson), *Doncaster* (bright red) and *Grand Arab* (a dazzling crimson). The varieties referred to are all admirably adapted for beds on lawns or borders to carriage drives.

Soil.—There exists a general opinion that Rhododendrons will only thrive in a rich peaty soil. In actual practice, however, it is found that they may be grown successfully without peat, providing a good loam may be had. The top spit of an old pasture which is fibrous and loamy, together with leaf-mould and well-decayed manure or dried cow-manure, makes an excellent compost for Rhododendrons. It should always be borne in mind, however, that a coarse, fibrous soil is greatly to be preferred to a fine one. The dislike that Rhododendrons have for lime is quite well known, and I know of isolated cases where these plants have failed even though a peaty loam had been imported. Such failures are probably due to the presence of too much lime in the water.

Although spring is the best time to carry out the work of transplanting, there are few shrubs that withstand it so well at any season, providing a good ball of soil is removed with each plant and all reasonable care is taken to protect the delicate fibrous roots from undue injury. Watering should be well attended to after planting, and the work carried out with all possible haste. Pruning is not, as a rule, necessary for Rhododendrons, although, if required to keep the plants within bounds, the knife may be used at this season. Its smooth, shiny leaves render the Rhododendron a first-rate subject for town gardens, for smooth leaves are less liable to injury from deposits of

leaf-soil, one quarter; rotted manure and coarse sand, one quarter.

The plants may be flowered in pots of various sizes, those 5 inches, 6½ inches and 7½ inches in diameter being the most useful. In some cases the seeds may be sown in the pots, the resultant seedlings thinned out in due course, and the plants retained left undisturbed in the pots to flower. This is a desirable way of treating the annuals raised late in the season to form a succession to those that flower during June, July and the early part of August. The seedlings forming the first batches of plants must be transplanted from pans or boxes, or even the open borders, while they are small, and



RHODODENDRONS ARE GOOD FLOWERING SHRUBS FOR BEGINNERS IN GARDENING, EXCEPT WHERE THE SOIL CONTAINS MUCH LIME.

soot in a smoke-laden atmosphere than are those of a soft, downy texture.

SPARTAN.

ANNUALS IN FLOWER-POTS.

MANY persons who are quite used to the cultivation of annuals in the open borders may think it is a very easy matter to grow them as well, or better, in pots. If every attention be paid to their requirements just at the right time, exceedingly fine displays of flowers may be so grown; but if neglected at all, the plants will be weedy and very unsatisfactory. There is one point that I would like to refer to at once, namely, the unsatisfactory results which follow the transplanting of annuals when they are rather forward in growth.

Ordinary soil, taken from the garden borders, will not do for our purpose. A good compost is essential, and the following may be easily procured: Turfy loam, with the fibre plentiful in it, one half;

be grown on quickly; that is, before they become at all pot-bound they should be repotted.

If the loam is of a light nature, fairly firm potting is advisable; if somewhat clayey, pot less firmly. The newly transplanted, or repotted, plants must never be allowed to droop through full exposure to the sun. At first, until they are somewhat established, shade the plants a little; a frame with a north aspect is an ideal place for them. Clear water only must be given until the flower-buds form; then judicious feeding will do much good. These pot plants are very useful for growing in yards, porches and cool conservatories.

Sweet Peas, of course, must head the list. Asters, Stocks, Zinnias, *Salpiglossis*, Marigolds, *Godetias*, *Nasturtiums*, *Mignonette*, annual *Chrysanthemums*, *Clarkias*, *Candytuft*, *Sweet Sultan*, *Phlox Drummondii*, the *Ice Plant*, *Poppies* in variety and *Calliopsis* are all beautiful. B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Lapagerias.—To encourage these greenhouse climbers to make a good growth, syringe frequently and keep the roots well supplied with water. Attend to the regulating and tying of the growths, and guard against attacks from slugs. Established plants will benefit by an occasional soaking with properly-diluted farmyard manure. Keep a sharp look-out for thrips, which soon cripple the foliage.

Humea elegans.—Make a sowing now for producing good specimens to flower next summer. Sow the seed thinly in a well-drained pot or pan in a finely-sifted, sandy compost, and place in a warm greenhouse till germinated.

Tuberous-rooted Begonias.—Keep the plants well supplied with water, and occasional applications of liquid manure will be beneficial. Carefully stake the flowers with neat green sticks, and shade from bright sunshine.

Crotons.—To encourage a free growth and impart that fine colouring to the foliage, the plants need the maximum amount of sun. Now that the plants are rooting freely, more water will be necessary, and some stimulant should be afforded. Keep the growths well syringed and the surroundings thoroughly moist. Have the plants as near to the glass as possible.

Chrysanthemums.—For those who grow large blooms and do not wish to be bothered with the timing and stopping of the buds, an excellent method whereby one can ensure having them, and also a succession of flowers, is to cut the plants down almost to the ground-level the first week in June, either before or after the final potting, and allow three or four breaks to come away, taking the first bud made. This method also ensures dwarfier plants, and is to be preferred for small houses.

The Flower Garden.

Sub-tropical Bedding.—To obtain the best effects, the ground should be well worked and heavily enriched with rotten manure, choosing a sheltered portion of the garden. Stake the plants and secure them with good, strong strands of raffia to prevent injury from wind. In the event of dry weather, give the plants copious supplies of water at the roots, and damp overhead in the evening when the weather is warm.

Aquilegias.—For cutting purposes the long-spurred hybrids in their various shades of colour are indispensable. A sowing may now be made in a shady border for producing plants for next season's flowering.

The Kitchen Garden.

Asparagus.—Cutting from the permanent beds should cease from the middle to the end of the month, otherwise the crop for another season will be impaired. Keep the beds free from weed growth, and during showery weather dust with soot at intervals; this will be found effective against the ravages of the Asparagus beetle.

Broad Beans.—Another sowing may be made out of doors. Earlier sowings are now growing freely, and a stout stake or two driven into the ground at intervals with a string attached will be found good support. The earliest crop should be stopped when sufficient Beans are set; this will cause them to mature quicker, and is also the means of destroying the aphid which invariably attacks the points.

Marrows.—Give air freely to plants in frames when the weather is warm. Keep the flowers fertilised, and see that the plants do not suffer for the want of water. Keep the growths pegged down, and damp over twice a day.

Coleworts.—Make a sowing of these for following the summer Cabbages.

Cauliflowers.—Continue to plant out for succession those sown during the month of April. Thoroughly well water them in, and place a mulch of manure round those that were planted earlier. The earliest plantings should have the leaves tied up to preserve the flowers.

Endive.—The present month is a good time to make a sowing, where space permits, of a row, such

as between the Celery trenches. Thin out the plants when large enough to a foot apart.

Hardy Fruit Garden.

Cherries.—Encourage the fruits to swell by soakings of water at the root, together with the protection of a mulch. Keep the foliage clean by frequent syringings, and if aphid is very troublesome, use an insecticide properly diluted. The longest of the shoots and those required for extension should be tied in, and others pinched back.

Strawberries.—Immediately the earliest batch commences to colour, some protection must be given from the birds by stretching hexagonal-meshed netting over some supports on the bed.

Figs.—The earliest fruits will now be swelling fast, and where possible give the trees a good soaking with liquid manure-water. Tie up the longest of the growths or nail them in.

Fruits Under Glass.

Madresfield Court Grapes.—To colour these to perfection, allow plenty of foliage to mature over the berries to afford a natural shade. This variety in particular is very prone to splitting of the berries, and to avoid this give a good circulation of air whenever possible. Leave a little on at the top ventilators all night, or else air very early in the morning. Watering at the root should be discontinued when the berries commence to colour.

Late Grapes.—The thinning of such varieties as Gros Colmar and Gros Maroc must be more severely done, as was necessary with the earlier varieties. Attend to the watering of the borders and apply stimulants in variety, well washing them down. More air will now be needed and the shutting up of the house may be left till later. On warm nights the top ventilators may be reopened a little. This will be extremely beneficial to the foliage. If not already done, the borders should be mulched with rotten manure. This not only conserves the moisture, but does much to check attacks of red spider. Damp down the paths late in the evening, especially when near to the hot-water pipes. If any sign of mildew is noticed, smear the pipes with sulphur mixed to the consistency of paint and make them thoroughly warm.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Melons.—Seeds for a late crop should be sown now, one seed in a 3-inch pot, from which the seedlings may be transplanted into the fruiting border.

Figs.—The early crop, as soon as it has been gathered, should be followed by means to induce the production of a second without loss of time. Generally, a dressing of manure to the border for old trees, a drenching with water and less ventilation will be all that is necessary.

Pot Trees.—Rich surface-dressings with abundant supplies of very dilute manure-water are essential to the production of fine fruit. Liberal ventilation affects the trees beneficially in many ways, and is one of the best means of keeping them immune from insects.

Strawberries.—Runners cannot be had too early, and, if not all, at least some will now be large enough to layer. It saves much labour if the layers are brought together out of so many of the interspaces and layered either in small pots, pieces of turf, or prepared soil. None of the plants is in this way overlooked when watering, which is more expeditiously performed when the plants are grouped, and weeding and other necessary work is more easily attended to.

The Fruit Garden.

Apples.—If trees trained to espaliers have not yet been disbudded, they should be seen to without further delay. As a rule, they should not be pinched, which only induces the production of more unnecessary growths, but be broken clean off, and thus give abundant space for the foliage on the spurs left to expand.

Pears.—Some trees have set enormous crops, and these are now in fit condition to thin. Small-fruited varieties, such as Winter Nelis and Bergamotte Esperen, should be much reduced in numbers, the larger fruits of these being always better flavoured.

Netting Fruit.—The early ripening of Strawberries which are very forward calls for means of protection, which for these and all other fruits should be securely placed over the fruits before they are ripe enough to tempt birds. Once these get a taste of the fruit, it is barely possible by ordinary means to keep them out.

Training.—Young trees of all kinds, but more particularly of Peaches and Plums, will need constant attention to keep the young shoots neatly nailed to the walls. Any lateral growths should be pinched while still very small. Grape Vines which do not, as a rule, fruit also need the shoots fastened loosely, or else pinched in those instances in which they are not wanted to cover walls.

The Vegetable Garden.

Coleworts.—Sow seed of London Coleworts for a full crop. They will be ready to use in mid-winter.

Late Peas.—During the incoming week make a large sowing for latest gatherings, which sometimes extend into November. The Queen and The Gladstone are two very reliable varieties, being little susceptible to mildew. Proceed as recommended for the last sowing. By no means use many seeds, and allow abundant space between the rows.

Potatoes.—When lifting the earlies, note the best plants and select the tubers from these for seed for another year. It is usual to allow the tubers to lie in the open to "green" before storing them, but they may be stored at once in an airy room where they will be isolated from disease should it attack living plants.

Vegetable Marrows.—Strong plants in 4-inch pots, planted in vacant spaces and started by means of abundance of water at the root, will grow very rapidly and produce nice Marrows for use in autumn. It is best to limit the number of shoots, three or four at the most being sufficient. Cut when young. Large, overgrown Marrows are a great drain on the energies of the plants, and for eating are of no great value.

The Flower Garden.

Tidying Up.—It not infrequently happens that routine work is neglected at this period, but it should be overtaken at once now that the fiercest of the battle with bedding plants is over.

Dwarf Plants.—The mossy Saxifrages, evergreen Candytufts, Aubrietias and dwarf Phloxes are examples of plants which it is desirable to keep neat throughout the summer months. This is best attained by means of a pair of hedge or sheep shears, the old flower-heads and straggling growths being neatly trimmed. New growth springs at once, and it is an aid to the plants to sprinkle some finely-sifted compost over them, which the first shower of rain washes down. The neat, grey-leaved Cerastium needs to be repeatedly trimmed in the same way, by which means it produces a succession of new shoots all through the summer months.

The Plant-Houses.

Pits, &c.—There are always a few structures emptied at this season, when the opportunity should be taken to clean them thoroughly, burning sulphur to destroy with its fumes any insects that may be alive.

Zonal Pelargoniums.—Those in 4-inch pots should now be at the proper stage to repot into 6-inch ones for flowering in winter. They are best stood out of doors on a cinder-bed till September. A few of last season's plants shaken out and also repotted into 6-inch pots bloom more profusely and earlier than young plants; otherwise the treatment is identical.

Arum Lilies.—There need be no further delay in planting these into a quarter of the kitchen garden to pass the summer. If increase of stock is wanted, small pieces taken off the larger plants and set singly will furnish nice material to flower in 6-inch pots. The plants otherwise, once they are deeply planted, require no further attention till the time for repotting arrives.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

DAFFODIL NOTES.

SOME GOOD, CHEAP VARIETIES FOR SHOW.—
BRECON MEMORIES.

ACCORDING to my promise in my notes of May 18, I now submit a list of a few good, cheap varieties for show. Everyone feels a little flattered when his advice has been followed, and pardonably so, I hope, when it has led to good results. So, just as a dealer prefaces his catalogue with an account of the medals and prizes he has won, in order to show the goodness of his wares, may I be allowed to refer to the success of my friend, Mr. A. C. Carne Ross of Brecon, at the Brecon show this year. Brecon to me is an ideal local Daffodil show. To begin with, they have got the right people at the head of affairs—Lord Glanusk, who "works like a horse," and Miss A. de Winton, who is energy personified. Then such competitors! all "as keen as mustard"!—Captain Kitchin and Mr. Carne Ross, among others. I was afraid the exigencies of soldiering would lose us the former, but the powerful magnet of the garden has drawn him from the Service, and a hard-to-beat man has been saved. Mr. Ross is a typical plodder, who is year by year, with careful discrimination, building up a collection of good, reliable sorts which are just the thing for shows. He did very well indeed this year, and he has already asked my advice with regard to additions for 1913. I hope what I have suggested will be found to have been helpful; ditto, when what follows is read. Cornelia, Monarch, Mrs. H. J. Veitch, Mervyn and King Alfred are all excellent yellow trumpets that, when shown in good form, take some beating. Among bicolors there are Duke of Bedford, Coronet, Cygnet, Dorothy Kingsmill and Waxwing. In the white trumpets Mme. de Graaff is indispensable; Treasure Trove and Princess are certainly the pick of the bunch of the rather expensive sort. The former may be had for half-a-sovereign, and the latter for half-a-crown more. Both are good, refined flowers with flat, symmetrical perianths, broad and overlapping segments and shapely trumpets.

Coming to Division II. (*incomparabilis*), in section (a), with yellow perianths, Blackwell cannot be too highly recommended, and the same may be said of Homespun. This last-named variety is a soft yellow self, to which the words "of perfect form" may truthfully be applied to all well-grown specimens. Solfatare is certainly one to go for. Apart from its great merit as an extraordinary lasting garden plant, the pale colouring of its *Nelsonii*-like cup and its large imbricated, but yet rather loosely-built, perianth give it a very distinct character. The splendid old red-cupped *Gloria Mundi*, it must be remembered, is still one of the best. Among the white perianths, I put Whitewell as an outstanding flower of the highest merit, "alho' I says it as shouldn't," it being my own introduction. This last season it must have been seen at almost every Daffodil show in the kingdom, and it invariably held its own, although the dry and hot summer of 1911 did not suit it very well. Brigadier, a pointed Lady Margaret Boscawen, is a variety of great merit, and not so well known as it should be. "A good 'two-bob' flower" is my comment. The bicolor Steadfast is one of the late varieties that the present curious season has brought into prominence. It is a true florists' flower, and very satisfying to the "con-noise-er."

The new Barri division (No. 3) is a large one, and selection is difficult. Perhaps among the yellow perianths Coreen, Castile, Cœur de Lion and Occident, and among the white perianths Circlet, Incognita (especially if you could buy a bit of the Lissadell climate with it), Ethelbert and Sunrise, are the ones I would be going on with until the longingly wished-for time of Challenger, Queen of Hearts and Sheba, being mine, should come.

In the 1910 arrangement of classes all the Leedsii are put together. I regret it, as it is a division of many types, and I fear, looking at the present trend of judging practice, that some of the most beautiful forms will drop out. We want Countess of Southesk type, and we want Empire type, and we want Venus type. I hardly know what to advise, but no one can be wrong in acquiring Evangeline (a pale bicolor Homespun), Pilgrim and Countess of Southesk (two Frank Miles sorts of Leedsii), Diana (it was good with me this year) and Easter, with a few bulbs of the indispensable White Queen.

Doubles and bunch-flowered kinds, as also triandrus and Jonquil hybrids, I must let severely alone. This leaves me with only the Poets, and what to say about them I do not quite know. They all seem to have such a liking for poor Edward Terry that they will go in for copying his neck. The worst of it is, they always seem to take a special delight in showing off their mimicry just when you do not want them to. Well! readers, all we can do is to humour them, and take them at their own time, and tell them if they will only do as we want them for a short time when we are showing them to our visitors, they can play at Edward Terry necks ever afterwards. Cassandra, Virgil, Homer, Horace, Laureate, Matthew Arnold and George Herbert are among the best behaved, but the choice is so great and the differences so small that I hesitate to advise.

Of one thing I am certain: early planting is the golden key that unlocks the prizes in the following spring.

JOSEPH JACOB.

LEGAL POINT.

Notice to Quit (*Joycey*).—If a tenant holding under a three years' agreement remains in possession after the expiration of the term, paying rent quarterly, he becomes, apart from express agreement to the contrary, a tenant from year to year. Such tenancy can be terminated by the customary half-year's notice given for the end of the current year of the tenancy, *i.e.*, it must be given for a date corresponding with that on which the tenancy commenced. If the tenancy did not commence on one of the customary feast days, the notice must not be less than 182 days. If the tenancy commenced on Lady Day, the notice must be given on or before Michaelmas Day. Of course, this is all liable to be modified by the express stipulation of the parties; by express contract they may do what they please. In case of an agricultural holding, apart from contract to the contrary, a year's notice must be given. A tenant who only intends to stay for a year should decline to sign an agreement whereby the premises are demised "for one year and so on from year to year," as such tenancy would endure for two years. The landlord is right in his contention put by the querist, and a fresh notice, given on or before Michaelmas Day for March 25, is necessary, unless the landlord can be induced to accept a surrender at an earlier date.

BARRISTER.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

NARCISSUS GROWING WILD (*B. A. I.*).—The flowers were rather faded; but we have very little doubt but that it is *N. hiflorus*, which is found wild in certain parts of Britain.

CENTAUREA ATTACKED BY FUNGUS (*J. P.*).—The *Centaurea* is attacked by the rust fungus (*Puccinia suaveolens*). The same fungus attacks *Thistles*, and usually prevents them flowering. We fear that, when once attacked, nothing can be done to cure the plants. We recommend you to root out the worst attacked, and to spray the rest with a rose-red solution of potassium permanganate.

WHITE-FLOWERED BEDDING PLANT (*Wulfruna*).—If needs be you might reduce the grossness of growth of the *Marguerite* by plunging the plants in pots instead of planting them out. In this case, however, they would require more attention in the watering. Other suitable subjects would include white *Petunia*, white tuberous-rooted *Begonias* and white *Phlox Drummondii*, all of which are free and profuse flowering.

LILIES FAILING (*L. J.*).—It is difficult to account for such wholesale failure as that you describe unless you put it down to the heat and drought of last year, and these, exceptional as they are, can hardly be held absolutely responsible for the wholesale failure of long-established clumps, though they might have much reduced their strength. You do not say whether you have examined the positions where the complete failure has occurred to discover the present condition of the bulbs. This might have shed some useful light in the circumstances. Occasionally, when the bulbs have long remained in one place, they sicken and become a prey to root fungus; though of personal knowledge we know of fine clumps in your county that have done well for many years without much care. The sharp spell of frost in the early spring of this year could not have injured the plants unless growth was forward, and that evidence would have been before you. In the circumstances we can only advise you to examine the positions where the bulbs have been and glean all possible information. Had the bulbs given a prodigious flowering last year, that, with the heat, might have been held responsible, as collapse frequently follows. When you have made an examination, write us again.

TREATMENT OF EREMURI (*J. S. E.*).—If the bed was only made and planted in January last, the plants will require well looking after to prevent disappointment ensuing next year. The planting was done much too late, and early October—the season when, under normal conditions, root action is set up anew—would have been far better. Because of this late planting the current growth may suffer, though that would be governed by local conditions and the method of planting. Hence for the moment encourage the best possible development of the plants, affording them water or liquid manure occasionally if dry weather is experienced, in addition to a mulching of manure. The *Eremuri* do not root deeply or numerously, but send out tlong-like roots which radiate horizontally from a common centre, and in two or three years such roots may be found 3 feet or even 4 feet from the crown of the plant, and often not more than 6 inches or 8 inches below ground; hence the soil should not be much or deeply disturbed within these limits. A light pricking over of the surface and a mulching of half soil, half manure, would be helpful to more established plants than yours. In winter, mulch the plants well with litter or the young leaves of Bracken. Nearly all the *Eremuri* suffer from the keen winds and frosts of spring; hence a position sheltered from the north and east is desirable, the shelter of a shrub-belt being the best of all. Do not allow the plants to ripen seeds this year; it will only tend to weaken them.

TREES AND SHRUBS.

"YELLOW" WISTARIA (*J. C. K.*).—The mention of yellow-flowered *Wistaria* to which you allude was probably made by a reporter who did not possess a very good horticultural knowledge. We have not heard of a kind bearing yellow flowers, and it is probable that the *Laburnum* flowers were mistaken for *Wistaria*.

VALUE OF TIMBER (Gardener).—It is not possible to give any hard-and-fast price for timber, as the price of the same kind and quality of wood differs considerably in different parts of the country, and even within a few miles. Several pence per cubic foot more may be obtained for wood within an easy distance of a station or waterway than for that which is in a position several miles away from a station. Good average Oak may sell for anything between 1s. 6d. and 2s. 3d. a cubic foot. Scots Fir, if of good quality, rarely sells for more than 6d. a cubic foot in the South of England. Spruce sells for the same price; Larch from 1s. to 1s. 2d. a cubic foot; Poplar, 6d. to 10d.; and Beech, 9d. to 1s. 6d. Rough trees have to be sold for less money.

FRUIT GARDEN.

MAIDEN APPLE TREES (E. S. K.).—We should certainly take off the flowers. It would cripple the young trees' growth for many years to allow them to carry fruit as maidens.

VINE LEAVES WITHERED (A. S.).—The leaf sent is perfectly healthy; but being young as yet, it is, of course, tender. The cause of the edges turning slightly up, we think, is the recent great heat and too close an atmosphere in the house. Ventilate more freely while the weather is so hot, and thus keep down the temperature; and, of course, you will see that the Vines do not suffer from the want of water at the roots. Before the next watering is done, give the border a fair sprinkling of lime, forking it in about two inches deep, and then water. For green fly, vaporise with XL All, half the strength recommended for red spider and thrip. This will bring the fly down and will not hurt the Vines.

MISCELLANEOUS.

NAMES OF PLANTS.—E. M. Parkstone.—Muscarri comosum plumosum.—E. H. W.—Valeriana Phu (the Cretan Spikenard).—E. B. Wigam.—1, Pyrus Aria; 2, Acer Psedno-platanus.—E. S. Bucks.—Pyruslobata.—F. U., Westerham.—Veronica gentianoides.—F. Luvani.—The Rose had dropped all its petals and was past recognition.—E. W., Devon.—1, Spirea japonica variegata; 2, S. japonica; 3, S. tomentos; 4, S. aranta; 5, S. species; 6, S. Van Houttei.—W. J. B.—1, Muscari comosum plumosum; 2, Olearia gunniana; 3, Scilla peruviana.—E. F. C., Hants.—Rosa hispida.—E. G., near Leicesters.—Phlomis tritocosa.—C. E.—Fabiana imbricata.—H. T.—1, Ceanothus dentatus; 2, Iris sibirica orientalis; 3, Thalictrum aquilegifolium; 4, Diervilla rosea; 5, Iaula glandulosa; 6, Achillea Kellereri; 7, A. tomentosa; 8, Lychnis Viscaria flore pleno; 9, Geum intermedium; 10, G. chiloense variety; 11, Berberis species; 12, Silene species, specimen too scrappy to identify. The others are garden seedling forms of Heuchera.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

UNQUESTIONABLY the chief feature of the fortnightly exhibition held on June 4 was the magnificent display of Sweet Peas staged by Messrs. Dobbie and Co., while a gorgeous bank of Orchids from Lieutenant-Colonel Sir George Holford's garden served as a further proof, if such were needed, of the admirable way in which these gems of the floral world are grown at Westnabirt. Hardy plants, Roses and greenhouse flowers were alike well represented at the hall on this occasion; the tall spikes of Delphiniums and Erenuri, together with showy Poppies in their Oriental magnificence, were the admiration of all.

FLORAL COMMITTEE.

Present: Mr. H. B. May (chairman), and Messrs. C. T. Drury, W. B. Cranfield, W. J. Bean, J. W. Barr, G. Renthe, C. Blicke, W. Howe, C. R. Fielder, J. Jennings, R. C. Reginald Neville, G. Gordon, A. Turner, C. Dixon, W. Cuthbertson, J. T. Bennett-Poe, Charles E. Shea, C. E. Pearson, W. T. Ware, W. P. Thomson, E. H. Jenkins, W. J. James, G. Paul, J. Hudson, F. Page-Roberts and R. Hooper Pearson.

Messrs. G. Bunyard and Co., Maidstone, arranged a particularly good table of herbaceous subjects, which included Pyrethrums, Peonies, Spanish Frises, Heucherias, Poppies and other good and showy plants. The Poppies and Peonies made a particularly fine bank of colour, and lightened by the other flowers named made up an exceedingly attractive whole.

Mrs. E. Lloyd Edwards, Bryn Oerog, near Llangollen, showed baskets of hybrid Heucherias in charming variety, such as Queen Mary (scarlet), Princess Mary (pink), Liberty (scarlet, small-flowered) and Edge Hybrid Improved (a pink-flowered form) being among the best. Her Queen of Roses is also a charming flower.

Mr. G. Renthe, Keston, Kent, displayed a small group of hardy things, in which were seen Orchises, Coronilla montana, Calochortus pulcherrus, Campanula Stevenii, Silene Hookeri, Lewisia Howelii and other good and useful plants. Viola hosniaca in this group was a very charming plant.

Mr. E. J. Hicks, Hurst, Berks, had a display of rambler and other Roses, the more attractive being Trier, the yellow Harrison, Soleil d'Or, and Sarah Bernhardt, the latter of rich crimson shade.

Messrs. James Veitch and Sons, Limited, Chelsea, showed a delightful series of Nemesias, of which Blue Gem, White Gem and Orange Prince were among the more noticeable.

Messrs. Kelway and Son, Langport, had a display of single and double flowered Peonies with occasional groups of Delphiniums. Among Peonies, Heart's Desire (pink, gold anthers), Meteor (crimson), Pride (maroon) and Tinted Venus were the best in a rather extensive exhibit of these things. Delphinium grandiflorum plenum was also well shown; it is a double-flowered variety, and a by no means commonplace plant.

Messrs. J. Peed and Sons, West Norwood, S.E., displayed a splendid lot of Gloxinias, mostly of named varieties, and generally of a superb, well-flowered strain. The fancy or spotted-flowered varieties were very charming. Ruth (violet), Mrs. John Peed (violet and white) and Queen Alexandra (of pinkish hue) being notable. Streptocarpus were also well exhibited by this firm.

Mr. Leslie Greening, Richmond, had a small corner display of rockwork associated with alpine and aquatic plants.

Messrs. Dobbie and Co., Edinburgh, staged a delightful lot of Sweet Peas, the flowers superbly grown and not less superbly displayed. It was indeed a magnificent exhibit, and one of the best; it is hardly likely to be surpassed in the present season. Elrida Pearson (pink), Melba (salmon), Dobbie's Scarlet, Afterglow, Mauve Queen, Mrs. Hugh Dickson (pink and cream), Thomas Steven-son (orange scarlet) and Dobbie's True Lavender were a few of what might be regarded as the indispensables of a capital lot.

Messrs. Paul and Son, Cheshunt, had a rather extensive display of Peonies and Heucherias, Whiteley, of the former, pure white with golden anthers, being most conspicuous.

Messrs. Phillips and Taylor, Bracknell, Berks, showed Poppies, Pyrethrums and Water Lilies in variety.

Messrs. E. W. King and Co., Coggeshall, Essex, displayed a delightfully artistic exhibit of Sweet Peas, arches, vases and groups tending to show these flowers to the best advantage. This was a really beautiful lot most pleasingly arranged.

Messrs. F. Cant and Co., Colechester, had some lovely Roses, Una, Irish Elegance, Mme. Melanie Souper and Pami's Carmine Pillar catching the eye at once.

The Misses Hopkins, Shepperton-on-Thames, had an interesting exhibit of hardy things, Pinks, Onosma taurica, Dianthus neglectus and Aubrietia Lloyd Edwards being noted in a nice lot of things.

Messrs. W. Cutbush and Sons, Highgate, N., exhibited a very taking lot of Hydrangeas in the newer varieties, Mme. E. Moullière (white) and General de Vibraye (pink) being among the more conspicuous.

Messrs. Reamsbottom and Co., Geashill, Ireland, displayed in very charming variety the St. Bridgid Anemones in many shades of colour.

Messrs. Fells and Son, Hitchin, had a display of Pyrethrums and Frises.

Messrs. T. S. Ware, Limited, Feltham, brought Frises, Poppies, Erenuri, Gaillardias, Campanulas, Iris ochroleuca, Delphiniums, Antirrhinums and Heucherias, together with a small assortment of alpines, the whole filling a rather lengthy table. Lewisia Cotyledon and Mazus Pumilio were notable things.

Messrs. Stuart Low and Co., Enfield, staged a bright and effective group of Carnations, both as pot plants and in the cut state. Lady Alington, Baroness de Brien and Princess Juliana were all well shown, as also were some well-flowered Hydrangeas.

Mr. C. Blicke, Hayes, Kent, staged some admirable border Carnations, of which King George (pure white), Attraction (pure white—award of merit), Arzonant (scarlet), Queen Mary (salmon, clove-scented), Dauntless and Thomas & Becket, both yellow faneties of splendid size, were among the best in a superb lot of flowers. Donald MacDonald, also a yellow-ground laney, was in fine form. It is very rich in colour.

Messrs. J. Veitch and Sons, Chelsea, had a most interesting table of Cannas, Calceolarias, standard Fuchsias and Heliotropes. Cilanthus Dampieri and Lavatera assurgentifolia (violet and white flowers and woolly leaves) were also noted. Elaeocarpus reticulatus, with white, deeply-fripped flowers, was most charming and very profusely flowered.

Mr. G. Ferguson, the Hollies, Weybridge, showed a table of Delphiniums, chiefly of blue and white varieties, the latter more remarkable for their numbers than their intrinsic beauty or merit.

Messrs. S. Bide and Sons, Limited, Farnham, Surrey, brought a delightful lot of Sweet Peas in some thirty or more distinct varieties.

Cannas, Frises, Fuchsias and Pelargoniums were well shown by Messrs. Cannell and Sons, Swanley, Kent. Of the Pelargoniums there were no fewer than three dozen vases in the best varieties, and displayed with this firm's well-known skill.

Messrs. Paul and Son, Cheshunt, had a table of Moss and garden Roses, of which Iris Glory, Austrian Yellow Briar, Austrian Copper, the Double Yellow Scotch and sinica were notable examples. Una, too, was very charmingly displayed.

Mr. L. R. Russell, Richmond, had a table of rockwork and alpine plants, arranging colonies of Sedums, Edelweiss, Achillea, Campanula and other suitable subjects.

Baker's, Wolverhampton, had a rich display of Lupines, Poppies in variety and Viola cornuta purpurea, the whole making a showy lot.

Mr. James Douglas, Great Bookham, staged some admirable Carnations of the border class, of which Elizabeth Schiffer, Mrs. G. A. Reynolds (orange buff), Agnes Sorrel (maroon) and Margaret Lennox (yellow ground with scarlet border) were very fine.

Mr. H. Burnett, Guernsey, showed a magnificent lot of Perpetual-dowering Carnations in such varieties as Scarlet Glow, R. F. Felton, White Enchantress, Marjoun, Mikado, Mrs. C. F. Raphael, White Wonder and Mandarin.

Messrs. Piper, Barnes, Surrey, had a table of good hardy things, the more telling being Primula hulleivana, Dianthus deltoides Brilliant, Polemonium flavum, Campanula van Houttei, C. pulia and the new Wallenbergia gentianoides, a pretty and graceful plant, 18 inches high, with clear pale blue bells.

Messrs. H. B. May and Sons, Edmonton, had some particularly good groups of Heliotropes, Exora Williamsii, Swainsona galegifolia, S. g. alba and Verbenas in variety.

Messrs. Carter Page and Co., London Wall, showed Dahlias and Violas in variety.

Messrs. R. H. Bath, Limited, Wisbech, brought fine collections of Peonies and Pyrethrums.

An exquisite collection of views of Bulgaria, exhibited by A. Delmard, Esq., for H.M. King Ferdinand, came in for general admiration. Those views particularly from the neighbourhood of Sofia and Euxinograd created a good deal of interest among the visitors. The numerous scenes depicting the wild, rugged mountains of the Balkans, together with those of the King's gardens and quaint monasteries on the mountain slopes give to the stay-at-home Britisher an idea of the conditions that prevail in this Balkan kingdom.

Mr. James Box, Lindfield, Sussex, was represented by a brilliant display of Frises, Delphiniums and Oriental Poppies.

A nice lot of Roses, including such fine things as Rosa sinica Anemone, Austrian Copper, William Allen Richardson, Austrian Yellow and Mme. A. Carrière, was shown by Mr. George Prince of Oxford.

Mr. Amos Perry, Hardy Plant Farm, Enfield, had a brilliant display of Oriental Poppies in various hues, also Dietamnus caucasicus and a number of good hardy Lilies.

A first-rate collection of greenhouse Calceolarias, well grown and of excellent colour, was shown by V. Phillips, Esq., Crofton Court, Orpington (gardener, Mr. T. Hobbs).

The new Zonal Pelargonium Champion, which received an award of merit, was shown in quantity by Mr. P. Ladds, Swanley Junction, Kent. It will be described under "New Plants" in our next issue.

Six new and rare plants, viz., Dracocephalum bulbatum, Wildenia candida, Oxalis adonophylla, Primula yunnanensis, P. membranifolia and P. pulchella, were shown by Messrs. Bees, Limited, Liverpool.

Messrs. Whitelegg and Page, Chislehurst, Kent, showed Geum Mrs. Bradshaw, Delphiniums in variety and Calceolaria Chibranii in great profusion among other tree-flowering plants.

ORCHID COMMITTEE.

Present: Sir Harry J. Veitch (chairman), and Messrs. Gurney Wilson, R. G. Thwaites, F. Sander, F. J. Hanbury, A. McBean, W. Cobb, J. Cypher, W. H. Hatcher, J. E. Shill, H. G. Alexander, A. Dye, W. H. White, J. Wilson Potter, W. Bolton, de B. Crawshaw and C. J. Lucas.

Lieutenant-Colonel Sir George Holford, K.C.V.O., sent a splendid group of Orchids, among which were some well-flowered specimens of Cattleya Warscewiczii of good form and colour; Laelia-Cattleya canhamiana and Laelia Marti-netti The Prince, which was well coloured and had four spikes carrying sixteen blooms. Miltonias were also in most excellent condition, M. vexillaria Empress Augusta Victoria being perfect. Brasso-Cattleya digbyan-mossie was also well finished and of good substance. Oncidium divaricatum, with two large branching spikes nearly five feet in length, made a good centre, and the white form of Cattleya Dusseldorferi Undine was most effective. Odontoglossums and Dendrobiums were also included. The whole group was tastefully arranged by Mr. H. G. Alexander, and secured the gold medal.

Messrs. Hassall and Co., Southgate, showed a choice collection, including the white form of Cattleya Mendelii, Anguloa Clowesii and Dendrobium acuminatum. Silver Banksian medal.

Messrs. J. and A. McBean, Cooksbridge, Sussex, staged a choice group, among which we noticed Odontioda Cooksonii, O. Charlesworthii, with its rich, deep-coloured flowers, and several Miltonias and Odontoglossums. Silver Banksian medal.

The Liverpool Orchid and Nursery Company staged Laelia-Cattleya Cowanii. This was a most striking flower, with rich orange and earmine shaded sepals and a deeper labellum. Other notable hybrids were L.-C. Eudora and L.-C. dominiana. Bronze Banksian medal.

Mr. A. W. Jensen, Lindfield, Hayward's Heath, staged some good flowered Cattleyas, Odontoglossums and Cypripediums.

H. S. Goodson, Esq., 85, West Hill, Putney, had a most interesting group of plants, consisting largely of Odontoglossums, Cattleyas, Laelia-Cattleyas and Laelias. A silver- gilt Flora medal was awarded.

Mr. H. A. Tracy, Amysand Park Road, Twickenham, staged Dendrobiums, Oncidium, Odontoglossums and Masdevallias. A white form of Cattleya Mossiae was noticed, also a distinct form of C. Mendelii of good colour. Dendrobium Falconeri was also well flowered.

Messrs. Stuart Low and Co., Bush Hill Park, staged an interesting group, prominent among which were Oncidium Kramerii, Dendrobium densiflorum, Laelia-Cattleya Eudora, Niebe and canhamiana. Dendrobium thysiflorum was also well flowered, and the pretty Bulbophyllum Lobbii attracted attention. Silver Banksian medal.

Messrs. Sander and Sons, St. Albans, were in their usual form and presented a most attractive exhibit. Odontoglossum amabile x O. eximium was in good form. Miltonias were well represented, and Odontioda Bradshawia variety vivians is a most beautiful form. Silver Flora medal.

Messrs. Charlesworth and Co., Hayward's Heath, were strong in Phalaenopsis rimestadiana with large spikes of well-formed flowers. Odontoglossum Illustrissimum is a most striking form and colour. Cattleyas and Laelia-Cattleyas were also good. Silver Flora medal.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Lælio-Cattleya Fascinator.—Among the numerous Orchids that flower during the month of May, the plant just quoted occupies a high position. It is of easy culture, and deserves a place in every collection where Cattleyas are grown. The sepals and petals are almost white, while the large open lip is streaked and marked with rosy purple. The parents are the two fine species *Cattleya Schröderæ* and *Lælia purpurata*.

Primula pulverulenta Mrs. R. V. Berkeley.—The type of this charming variety is one of the most popular hardy Primulas in commerce, and any variation such as we get in the old *P. japonica* will be welcomed by all hardy plantsmen. The subject of the present note appeared as a sport among a batch of *P. pulverulenta*, and it was among the best of the novelties at the recent International Show. As in the type, the flowers are borne in whorls, but they are white with a small yellowish circle at the top of the corolla tube. There will, no doubt, be a great demand for this new plant, for it is a decided acquisition to the genus.

Rheum Alexandræ.—This very distinct Rhubarb, one of the novelties of 1909-10, is proving a good and striking plant, curious, yet pretty in its way, and useful for conspicuous situations where some character is required. It derives much of its value from the yellow bracts of the flowering stems, these being quite leaf-like in character and the stems being three feet or so high; these bracts show up well in the garden. The leaves are of a dark, shining green, and the whole plant is one of decidedly novel appearance. It is perfectly hardy, and has been found to be so in several gardens into which it has found its way.

A Showy Chinese Shrub.—The showy character of *Sophora viciifolia* has resulted in its rising to a conspicuous position among flowering shrubs in a short space of time, for it is not more than a dozen years since it was received into general cultivation. It differs widely from the well-known *S. japonica*, for, whereas the latter grows into a large timber tree, the newer species is of shrubby habit. Growing at least 6 feet high in the open ground and 12 feet against a wall, it forms a shapely specimen, with rather stiff, spiny branches clothed with small, bright green, pinnate leaves. The Pea-shaped flowers are borne in short inflorescences in June; the prevailing colour is white, but there is a distinct violet tinge, due mainly to the prevalence of that colour in the calyx. It may be propagated by means of seeds, which ripen freely, or by cuttings

inserted in sandy soil in a cold frame in July or August. Any ordinary garden soil suits it, that of a loamy character being the best. As large plants transplant badly, it should be placed in a permanent position while quite small.

An Effective Garden Poppy.—One of the prettiest of all annual or biennial Poppies is *Papaver umbrosum*, which is most effective among grass, and a fine display was made in this way at Kew lately. Nowhere does it look so fine as with this groundwork of greenery, but it is a lovely plant for the garden, and usually reproduces itself from self-sown seeds after it has once been introduced. The best plants are from autumn-sown seeds, but, hardy as it usually is, there are springs in which all the young plants may be killed, so that it is as well to save a few seeds every year for emergencies. This is a bitter lesson learned by a cultivator, who had every young plant of *Papaver umbrosum*, of which there were hundreds, killed one untoward season. The autumn and early winter had been unusually open, and the Poppies grew until after the New Year, when severe frosts, alternating with rains, came, and the *Papaver* succumbed. It is a charming Poppy, with deep but bright crimson flowers, each with a black spot at the base of every division of the flower, and the plant grows from 1 foot to 1½ feet in height. Seeds can be sown in the open in August for next year's bloom.

The Neill Prize for Horticulture.—The council of the Royal Caledonian Horticultural Society has this year awarded the Neill Prize to Mr. John W. M'Hattie, the Edinburgh City gardener. The prize, awarded for eminent services in horticulture, is the interest of a sum of money bequeathed by the late Dr. Patrick Neill for the purpose, and it is awarded every two years. The distinguished services rendered by Mr. M'Hattie to Scottish horticulture are well known and generally recognised. Since he entered upon his present appointment at Edinburgh about eleven years ago, he has effected great improvements in the city parks and gardens. While filling private appointments he was a highly-successful exhibitor, and secured many of the highest awards from the Royal Horticultural Society, the Scottish Horticultural Association and other horticultural societies, these awards including Veitch Memorial medals, a Banksian medal and the City of Edinburgh Cup. A native of the North of Scotland, Mr. M'Hattie held with great success several important private appointments before he entered upon that at Edinburgh, such as Newbattle Abbey and Strathfieldsaye. Mr. M'Hattie takes an ardent interest in the affairs of the principal Scottish horticultural societies and renders them yeoman service, so that the award will be generally acceptable to the members and others.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Good Trumpet Daffodil.—Having read the note, "Exhibition *versus* Private Garden Flowers," by "An Amateur," in THE GARDEN for June 1, in which he would like to know the name of a good late yellow trumpet Daffodil, we venture to say that The Doctor, a Daffodil we saw in the Rev. Joseph Jacob's garden at Whitewell, is one of the very best of all the yellow trumpets, and it is a late flowerer, expensive now, but a good variety and very effective.—ALDERSEY AND MARSDEN JONES, *Tilston, Malpas, Cheshire.*

A Useful Early Pea.—Anyone desirous of becoming acquainted with an early, productive and profitable culinary Pea would do well to give Veitch's Acme a trial. Growing about three and a-half feet high, with a strong haulm, it is simply smothered with pods from bottom to top, filled with nine to eleven good-sized Peas. Sown this year on February 14 in the open ground, splendid pods were gathered on June 1. Grown side by side with Chelsea Gem, sown the same date and under exactly the same conditions, Acme proved eight or nine days earlier.—J. B., *Margate.*

Genista mantica.—An Italian Broom which is but seldom cultivated even among good collections of shrubs is that called *Genista mantica*. It is not considered very hardy, but I think this is a mistake, at least so far as districts with a moderate climate are concerned. Two plants of *G. mantica* have been in my garden for at least six years, and they are growing well, although one of them, which is in a very exposed position, suffers at times from sharp and severe winds in winter and never makes the headway of the other. The latter is partly sheltered by other shrubs from the north winds, and flowers well annually, giving a good supply of its pretty, small yellow flowers.—S. A.

Zonal Pelargonium Hall Caine.—I am quite in accord with your correspondent (page 290, June 8), regarding the merits of this beautiful variety, although we certainly do not see eye to eye in the matter of colour. Your correspondent speaks of it as salmon, but to me it appears to be of a beautiful soft shade of red. According to the catalogues it is cherry red. It forms a grand pot plant, but is, I think, less grown now than it was at one time, probably owing to the fact that some of the newer kinds bear their flowers in larger trusses. A peculiar feature of this variety is that it frequently pushes out a secondary truss, which continues the period of flowers. Several varieties do this occasionally, but in the case of Hall Caine it often happens. There is another variety, Phyllis, which is in many ways almost a counterpart of the preceding, but the flowers are of a pleasing shade of soft salmon cerise.—H. P.

The Rose Acacia.—When this plant is in blossom during June or early July, the remark is often expressed that "it ought to be more largely grown," for there are few shrubs blossoming at that period which are more effective; yet it never appears to become common, for there are not many public gardens where it is well represented. The Rose Acacia (*Robinia hispida*) is a native of the United States of America, where it forms a dense, thicket-like growth from suckers. The rose-coloured flowers, which are as large as those of a culinary Pea, are borne in small racemes and are very effective. Better than the type, however, is the variety *inermis*, which lacks the stiff hairs

on the branches from which the former takes its name. Unfortunately, neither plant produces seeds, and propagation has to be effected by means of root cuttings or by grafting upon the common Robinia. Both plants thrive in ordinary garden soil of a loamy nature.—W. D.

The Cherokee Rose (*Rosa sinica laevigata*).—This very handsome Rose is flowering grandly on a south wall this season, and it is the first time it has flowered. This Rose is most beautiful. It has single white flowers with golden stamens; the flowers are 5 inches to 6 inches across, and present a magnificent appearance set in the beautiful shining green foliage, which is evergreen. I believe this Rose is found in the South of France and Italy, but its home is in the Himalayas, where I have heard of its being seen in great beauty, but not so large as when cultivated. It is not generally hardy, therefore its place is on a warm wall. It does not harbour pests like our Roses.—W. A. C.

A New Sweet Pea.—I do not know how far hitherto that well-known Daffodil-raiser, Mr. Herbert Chapman of Rye, may have entered the lists of Sweet Pea raisers, but those, in any case, are legion. Hence it is so very much the more meritorious when, out of the legion, but one here and there is fortunate enough to raise something that is exceptionally good. I think in his new waved pure white, *Iolanthe*, he has a really fine variety. I am in receipt from him of a bunch of blooms, and the flowers are exceptionally fine, being set in fours and fives on the long, stout stems. There is a solid whiteness about the flowers that is so attractive. If Mr. Chapman has sent his variety to the Sweet Pea Society's trials, it will there have to pass through a severe ordeal, as also it will when presented at the society's show next month. Necessarily, I see that alone. I have neither Etta Dyke nor Nora Unwin here for comparison, but *Iolanthe* is a superb white, all the same.—A. D., *Kingston.*

Anemonopsis macrophylla.—It will probably be interesting and possibly useful to some to say that *Anemonopsis macrophylla* has flourished well with me here for the past seven years, after it had been equally successful in a former garden of mine a few miles away. It has been all that time in the border, in common loam, rather on the dry side, possibly, for some things, but evidently suiting the *Anemonopsis*. My plant came originally to me as a seedling sent me by the late Rev. C. Wolley-Dod from his garden at Edge Hall, and it has never looked back since then, although increasing in size but slowly. It flowers annually, giving its charming pale rose and white flowers in a fairly free manner. They remind one of small-sized blooms of some of the pink or rose varieties of *Anemone japonica*, so that one can hardly quarrel with the name of *Anemonopsis*. I have been much interested in the remarks of Mr. Reginald Farrer in his "Alpines and Bog Plants," in which he discusses this plant in a manner not calculated to inspire confidence in its ways, though his later experiences were more favourable than his first ones. Mr. Farrer tells us that it has a bad reputation in gardens, and with this I quite agree. Like me, he first saw it at Edge, and resolved that he must possess it in health. He had, it appears, many failures, but finally put it out, when a fresh lot had been received, into a "rich border of peaty loam fattened with manure." Here success finally rewarded him; and he then speaks in glowing terms of the way the *Anemonopsis* took possession of its place. But there is a suggestive addendum,

as follows: "Latest news: this tale is too rosy"! My border was composed of fresh soil from a field with the turf dug in, and no manure was given. In my former garden it grew in a plot of sandy loam, poorer even than that here. One can only speak of it as it really is here, as undoubtedly it is difficult to establish in many places; and could we arrive at some definite understanding of its requirements, we would be well rewarded, as such a beautiful and distinct plant is worth a good deal of trouble to succeed with.—S. ARNOTT, *Sunny-mead, Dumfries.*

Ceanothuses Under Glass.—At no time were hardy shrubs forced prematurely into bloom as popular for indoor decoration as they are now, while the list of subjects so treated has of late been considerably extended. Some of the *Ceanothuses* are admirably adapted for the purpose, and what is decidedly in their favour is that in their charming tone of blue they stand out quite distinct from any of their associates. They do not readily lend themselves to hard forcing in the same sense as Azaleas or Lilacs; but brought on gently under glass they may be had in flower by the end of March or early in April, when, as the lighter tints greatly prevail among forced shrubs, they are, from their distinct shade, of considerable value for grouping purposes. When intended for forcing, they are best confined altogether in pots and plunged out of doors in a sunny spot during the summer months. At that time they are greatly benefited by an occasional dose of liquid manure. Of the different kinds that may be treated in this way, *Ceanothus dentatus* and *C. veitchianus* are two of the best. Both of these may be readily propagated by means of cuttings, and plants obtained in this way flower in a comparatively small state.

A Beautiful Exhibit of a Charming Annual.—A most noteworthy exhibit at the meeting of the Royal Horticultural Society on June 4, though by no means a very extensive one, was a collection of the different forms of *Nemesia* shown by Messrs. James Veitch and Sons of Chelsea. Some of the most distinct varieties were represented by about a dozen plants of each—a good idea, as in this way the general effect could be seen to advantage and comparisons between the different forms carried out without difficulty. Particularly striking were the plants of Orange Prince (with comparatively large flowers of an intense deep orange colour), Blue Gem (a charming form with flowers at a little distance suggestive of the *Forget-me-not*), White Gem (a pure white counterpart of the preceding), and bicolor (in which the upper part of the flower is light blue with a white lip). Under the name of Yellow Gem the plants shown were less uniform in colour than the two other Gems previously mentioned, but all were extremely pretty. Among the mixed colours, some of the scarlets and carmines stood out most conspicuously, though all were so beautiful as to render a selection a difficult matter. What is more, in viewing such masses of flower it was hard to understand that each consisted of but a single plant, as a close examination revealed. The plants, which were grown in the orthodox 4½-inch pot, or one 5 inches in diameter, had been stopped twice during their earlier stages in order to induce a bushy habit of growth, which treatment was conclusively proved to be most satisfactory. At all events, the charming selection of varieties and the high state of culture manifest in the condition of the plants were both worthy of record.—H. P.

A Seedling Loquat.—When passing through Italy a few years ago, I purchased some of the fruit of the Loquat, *Eriobotrya japonica*, at that time in season. The plant with its fruit shown in the illustration, the offspring of one of the seeds of such fruit reared in a cool greenhouse, may be of interest to some of your readers.—(Miss) E. R. TAYLOR, *Old Charlton*.

Cineraria Matador.—Those who have grown this beautiful *Cineraria* will be able to endorse every word that has been written in its favour on page 189, April 20 issue. For decorative purposes where a mass of colour is wanted the scarlet *Cineraria* has few equals. The variety can be relied on to come true; out of a batch of about seventy plants there were only two or three not up to the standard. Although introduced under the above name, I believe the same thing is offered as *New Scarlet*; at any rate, there is little or no difference in the colour of the flowers.—H. S. WARGRAVE.

Growing Wild Strawberries in Pots.

—The following note may interest some readers of *THE GARDEN*. Two years ago, while staying for a few days in Cheshire, I gathered some ripe wild Strawberries off plants growing on dry hedge banks. The fruits were very sweet, and for the novelty of the thing I brought a few roots away with me to the South of England. These roots were potted in 3-inch pots, and have remained in them ever since. Last year the plants bore a few fruits, which were very sweet and of fair size. This year the plants were placed in a vinery in March, and they have done remarkably well, although not specially attended to. Several dozens of fruits are borne on a plant, and they are as large again as when ripened in their natural state. The plants would, no doubt, do better still if they were re-potted and well cultivated. A lady to whom I gave a few fruits the other day said, "I had no idea that the wild Strawberry so grown would be so sweet."—G. G.

Primula farinosa.—The admirable way in which so many plants of the dainty native *Primula farinosa* were exhibited at the International Horticultural Exhibition by the Craven Nursery must have brought home to *Primula* admirers how beautiful this native plant really is, and how worthy it is of having its successful cultivation understood.

It is but seldom, save in its native habitats, that we can see it in such quantity in bloom, and when growing at home the plants are not, as a rule, so close together. It has already been so much discussed that the treatment it requires may not be considered worthy of additional space; but I am confident that the many who saw *P. farinosa* at Chelsea, as shown by the nursery named, will anxiously desire to own and to grow it well. It does not appear to object to wet in winter, provided the soil is well drained though moist; but the writer finds that it is desirable to give it plenty of water after it makes growth. Some lime, in the form of limestone chips or old mortar, has given additional vigour here, and in association with a soil of grit and loam, with a surfacing of chips, has given an excellent bloom this season.

The Summer Snowflake in Water.—At this season, when we are in possession of the flowers of the Summer Snowflake, *Leucojum aestivum*, it is well to consider how we can accommodate it in our gardens so as to give the best possible effect. In ordinary border cultivation it is a poor plant, so far as its habit is concerned, as the stems are too long for the size of the flowers, and the effect is far from good. In long grass it looks very well, but nowhere have I seen it look so pleasing as in about six inches of water, where it is not only prettier, but appears to thrive better than in any other place. I first saw this method followed at Mount Usher, where the late Mr. George Walpole pointed it out to me in such a situation—a small pond. Growing there in water, the leaves were



A SEEDLING LOQUAT IN A READER'S GREENHOUSE.

more handsome and the flowers finer. Those who have no water in their gardens should grow *L. aestivum* in moist soil and through other herbage, which would take at least 6 inches off the bareness of the stems.—S. ARNOTT, *Dumfries*.

FORTHCOMING EVENTS.

June 18.—Royal Horticultural Society's Meeting and Gladiolus Show. Lecture by the Rev. Professor Henslow on "Professor J. S. Henslow as Ecologist." Preston (Somerset) Gardeners' Association's Meeting.

June 19.—Yorkshire Gala (three days). National Hardy Plant Society's Show at the Royal Horticultural Society's Hall, Westminster. Jersey Rose and Sweet Pea Show (two days).

June 20.—Linnean Society's Meeting.

THE ROSE GARDEN.

THE UNRELIABILITY OF ROSE SPORTS.

SOME varieties of Roses sport very freely. For instance, Catherine Mermet has given us three that are really grand, viz., *The Bride*, *Bridesmaid* and *Muriel Grahame*. These sports would appear to be better fixed or more certain than many. Those from *Caroline Testout*, too, seem to come more true than most. I have had *Augustine Guinoisseau* carry flowers of *La France*, the variety it sported from. But the sports from *Comtesse d'Oxford*, viz., *Pride of Reigate* and *Pride of Waltham*, are very uncertain. I have frequently discovered two upon the same plant simultaneously. Another example occurs to me, and that is the two sports from *Heinrich Schultheis*—*Merrie England* and *Mrs. Harkness*. *Heinrich Schultheis* also sported its soft blush variety at two places simultaneously, and *Paul's Early Blush* is generally conceded as the prior name instead of *Mrs. Harkness*. I am sorry to say there is no reliability in these sports, or *Merrie England* would be our best striped Hybrid Perpetual.

Sir Rowland Hill sported from *Charles Lefebvre*, and when it comes true we have no other Rose that approaches its deep and yet clear port wine colour shaded with maroon; but we cannot depend upon it—in fact, not half of my flowers are of the desired colour. However, the blooms are always good, for they are either *Sir Rowland Hill* or *Charles Lefebvre*, and a better dark Hybrid Perpetual it would be difficult to select.

Then there are many climbing sports that have come from what were quite dwarf growers in their normal condition. Climbing forms can now be had of *Kaiserin A. Victoria*, *Mrs. W. J. Grant*, *La France*, *Caroline Testout*, *Cramoisie Supérieure*, *White Pet*, *Devoniensis*, *Lady Ashtown*, *Liberty*, *Papa Gontier*, *Niphetos*, *Perle des Jardins*, *Souvenir de la Malmaison* and others. The unreliability of these is very marked. Often we can find a plant quite as dwarf in habit as the variety was when first introduced. Even buds worked from the same shoot have produced both dwarf and climbing forms.

When we come to the *wichuriana* we find *Dorothy Perkins*, to take only one example, producing many sports. Two very good ones have originated in our gardens. *White Dorothy* has more than once had the true *Dorothy Perkins* upon it, and what is even more remarkable, there have been distinct flowers in the same trusses of bloom.

Baroness Rothschild has given us *Merveille de Lyon*, *Merveille de Blanches* and *Mabel Morrison*, which keep as true as any among the Hybrid Perpetuals. Unfortunately, they are also minus perfume, or they might have some slight chance with that grandest of white Hybrid Perpetuals, *Frau Karl Druschki*, which, again, is minus fragrance.

Etienne Levet, *La Reine*, *Eugène Fürst*, *Baronne Prevost*, *François Dubreuil*, *Francisca Kruger*, *Bougère*, *Duchesse de Morny*, *Sunset*, *Mme. Falcot*,

Papa Gontier, Anna Olivier, Mme. Masson, Maman Cochet, Phyllis, Mrs. W. J. Grant, Mme. Willermoz, Suzanne M. Rodocanachi, Mme. Cusin, Conrad F. Meyer, Kaiserin A. Victoria, G. Nahonnand, Souvenir d'un Ami, Perle des Jardins, Lady Mary Fitzwilliam and General Jacqueminot all have the sporting character, and have already given us some good and distinct Roses. I have not exhausted the list in the foregoing, and perhaps there may appear little purpose in these notes; but I wished to show how easy it is for one to imagine he has a wrongly-named plant when the fault really lies in the reversion to the normal variety.

Sussex.

A. P.

THE NAMING OF ROSES.

AN American horticultural paper announces in its advertisement columns an offer of a prize of one hundred dollars for a name to be given to a new seedling Rose, which is said to possess all the good qualities of a red Rose from a commercial florist's point of view. I should say the competition is only open to florists, private gardeners and others engaged in horticultural work residing in the United States and Canada.

This offer is made by A. N. Pierson (Inc.), Cromwell, Conn. This certainly is one method of booming a Rose, but I do not suppose English or Irish growers have so exhausted their resources for names that they will copy our American cousins.

While upon this subject of names, I would enter a friendly protest against the practice adopted by American florists in giving other names to well-known Roses. For instance, they now call Antoine Rivoire by the name of Mrs. Taft. This would be bad enough if there was not already a Mrs. Taft among the dwarf-growing Polyantha Roses; but I think all Rose-growers will agree with me that such a practice is likely to lead to great confusion. They have already given the name of American Beauty to a Rose whose correct name is Mme. Ferdinand Jamin, and there may be others. I trust this practice will be stopped, or certainly not countenanced by

responsible growers. We warmly welcome American novelties, and look forward to the pleasure of making the acquaintance of some of them. One named Madison should be a real winner, judging from its illustrations. It is a pure white flower, like The Bride, with foliage resembling Holly. It is said to be a splendid free-blooming Rose, and will produce a crop every five weeks in midwinter over there. This is not to say the variety will do the same here with our average sunless winters, but it should be a real beauty for spring flowering, also for outdoor work.

Eastwood, Essex.

WALTER EASLEA.

ROSE GROSSHERZOG FRIEDRICH.

THIS charming Hybrid Tea, which Herr Peter Lambert has given us, is a worthy introduction of the raiser of Frau Karl Druschki, Gustav Grünerwald and others. Its parentage is given as Caroline Testout crossed with Meta, that superbly-coloured Rose of Messrs. A. Dickson and Son's raising, and one may see in the bloom of the Rose under notice quite a distinct golden hue at the base of the petals. Its colour is of a rosy vermilion tint. Under glass it is particularly pleasing, the clearness of tint with a yellowish hue pervading the flower,



AN EXQUISITE HYBRID TEA ROSE: PHARISAER.

giving it quite a distinctness so much desired at the present day. I think we shall find Grossherzog Friedrich to be a real good thing. P.

HYBRID TEA ROSE PHARISAER.

IN this variety we have a very beautiful Rose, most accommodating in its requirements, for it is alike excellent under glass and out of doors. It is a variety well known to exhibitors and worthy of a place in every collection as a garden Rose. In colour the flowers are very white, deepening in the centre to salmon rose. The flowers are large and the buds long. It is not one of the "fair weather" Roses, since the fine long buds open well in inclement as well as in fine weather.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

Planting Seedlings.—This is one of the important tasks of the moment. It is, of course, well known that comparatively few of those amateurs who grow Carnations and Picotees hither about the cultivation of plants from seeds; they are content to have the superb flowers from the many magnificent varieties which the skill of the florist has placed

at their disposal, but one cannot say that this is altogether wise. The raising of plants such as these from seeds has a fascination which grows on most people, and intelligent, maintained efforts are sure to be handsomely rewarded sooner or later. I do not suggest that amateurs should invariably trouble about cross-fertilisation; they seldom know the best lines on which to proceed, and consequently their successes are few and far between; but men like Douglas and others offer seed from their own strains, and something meritorious, if not of outstanding excellence, is sure to come from every packet of seeds. Let the soil be well prepared for the young plants. Dig it deeply and thoroughly, and do not omit to incorporate with it some sweet leaf-mould or refuse manure, as well as crushed mortar or lime rubbish. To achieve the best results the soil should be friable to a depth of not less than 18 inches, and if more, so much the better.

Mulching.—As an aid to the retention of soil moisture, to keeping the ground pleasantly cool, and to conveying a little food at a time when it will most certainly be appreciated, mulching with short manure is invaluable. It is by no means uncommon for the material to be spread much earlier in the season than this, and usually to decided advantage, but its food properties will have gone by now, and those who are able to rake it off and put on fresh manure ought not to hesitate to do so. The soil must be carefully hoed, or pricked over with a small fork beforehand, and then a thin covering of the manure spread down. It must be short and

always loose to facilitate the free passage of water and air, or the benefits derivable from it will be much reduced.

Earwigs.—It may be well to remind the reader that one of the worst enemies with which he will have to contend when the plants are in flower are earwigs. They have a vicious habit of getting into the body of the flower, and it is not long then before they do irremediable damage. It is unfortunate that there is nothing really practical that can be done in the way of prevention, and incessant observance, with a view to instant destruction, should be the order of the day. Trapping must, of course, be done as far as possible, but conspicuous traps, such as are permissible among the

luxuriant-growing Dahlias, would not be tolerated for a moment in Carnation-beds. Pieces of dried moss or hay in small pots can be employed, but too much reliance must not be placed upon them, or disappointment is bound to come later.

Disbudding.—At the end of this month and during July we look forward to enjoying the beautiful reward for our labours in the past few months, and a decision must be come to immediately, if it has not been done before, as to the degree to which disbudding will be carried. As I said in my previous notes, I am generally in favour of the retention of three buds on a stem, but fewer or more may be chosen according to the fancy of the individual grower. As far as one can judge, each bud selected for development must be perfect, and some consideration ought to be given to their disposal on the stem, as when badly placed the artistic effect is not so good.

Morning Syringing.—Experience has proved to me that syringing in the early hours of the morning is especially beneficial to the plants in more ways than one. A great advantage lies in the fact that the probability of either green fly or thrips becoming dangerously numerous is reduced to the minimum, while the "grass" is assisted in no small degree, which means that there will be superior shoots for layering down when the time arrives to do such work next month. It cannot be doubted that either of these reasons alone justifies the labour and trouble involved in the operation, while there is the further merit of keeping the foliage clean and more attractive. F. R.

THALICTRUM ANEMONOIDES.

VERY much resembling some of the Anemones in flower, this charming little plant is one of the most distinct members of the Meadow Rue family. It is quite a contrast to the taller-growing kinds, some of which attain a height of 6 feet or more, barely being more than 6 inches high when full-grown. Coming into flower in April, or even in March, it is a useful plant for the alpine-house, succeeding well in pans, or, for the shady and sheltered parts of the rock garden, in light, rich soil. It is one of the few members of the genus which have distinct and showy petals, and is a North American plant, usually found growing in open woods and shady places. During the last few years we have had some valuable additions to this genus in cultivation from China, of which the most striking and attractive is *T. dipterocarpum*. This plant grows to a height of 5 feet or more, with a large inflorescence of rose purple flowers, the citron yellow anthers forming a beautiful contrast. Rather smaller in habit, with similar flowers, is *T. Delavayi*, from the same region. Some of the forms of *T. minus* make elegant little tufts of finely-divided, Fern-like foliage, very useful for table decoration with cut flowers. A plant that is worth a place in any garden is the handsome *T. aquilegifolium*, which grows about three feet high, with very attractive foliage and panicles of pale feathery-like flowers. Of this species there are other varieties, one, with dark purple stems and flowers, being called *Thalictrum aquilegifolium* variety *atropurpureum*. Of the taller-growing kinds, like *T. glaucum*, there are many, and they make excellent subjects for the wild garden or water-side. All may be increased by division in spring or autumn, or raised from seeds which are freely produced. W. I.

THE KITCHEN GARDEN.

TOMATO PLANTS OUT OF DOORS.

DURING the last few seasons many amateurs have undertaken the cultivation of the Tomato outdoors. The results have been good in many cases, considering the somewhat unfavourable weather experienced during the past summers. In the most favoured districts the plants require every attention to induce them to yield a fair crop. In cold, wet districts their cultivation outdoors cannot be recommended. Some fruit may be produced, but it is almost impossible for it to ripen under these conditions. The fruit in an unripened state is used for certain culinary dishes, and providing the aim is to produce fruit of this description, many growers in unfavourable districts plant in the most sheltered quarter at command. Endeavour to procure strong, short-jointed plants. If the plants are home-raised, so much the better. Keep

GROWING TURNIPS ON CLAYEY AND LIGHT SOILS.

SOME cultivators advocate the culture of Turnips in very firm soil. This is good advice when applied to soil of a light, sandy nature; but where clayey soils obtain it is a mistake to make them very firm. I have had to deal with the cultivation of large breadths of Turnips in both kinds of soils, and after a small experiment came to the conclusion that I could grow better roots in unfirmed, heavy soils than in those made quite firm by treading. Furthermore, I found that the roots swelled and were fit for table about a week earlier in unfirmed ground than in well-trodden borders. Both air and warmth penetrated the unfirmed soil and thus hastened growth. I have heard cultivators say, "Oh, it is necessary to have firm soil to produce nice roots with single tap roots attached." I have not found this to be a correct view in heavy loams, but I have noticed that certain varieties, and the best strains of them, grew perfect in form in unfirmed ground.



THALICTRUM ANEMONOIDES, A NORTH AMERICAN SPECIES WITH ANEMONE-LIKE FLOWERS.

the plants to one stem by taking out all side shoots as they appear. Do not overcrowd them.

Warm, sunny positions are most suitable, on a south wall or fence if possible. Secure the plants firmly, but allow plenty of room for the stem to swell freely. Attend to the pinching out of all side shoots. Give water when needed, and when three, or, in favoured localities, four, bunches of fruit have set, stop the plant by pinching out the top. Diluted manure-water applied occasionally will assist the plants to swell their fruit. By cutting off a portion of the foliage, sun and air gain free admission to the fruit. This operation is sometimes carried too far; cases have been known where every leaf has been ruthlessly cut from the plants even before the fruit is set. I have known blackbirds to attack the fruit when colouring. Varieties of Tomatoes are numerous. For outdoor planting, Holmes' Open Air, Winter Beauty and Satisfaction have proved excellent. COLIN RUSE.

The Turnip fly is much more troublesome in some districts than in others. The flies do not like turpentine. If a wineglassful be well mixed with two gallons of water and syringed over the bed when the weather is dull, the insects will not attack the leaves to any serious extent. Frequent hoeing of the soil between the rows with the Dutch hoe is most beneficial where Turnips are grown in heavy soils; but undue trampling upon the ground must be avoided.

In light soils the early crops do well enough if the fly be kept at bay; but in the case of succeeding crops I advise inexperienced cultivators to put on a thin mulch of well-rotted manure, for this is of great advantage to the growing crop. It is a very common occurrence in summer-time to find Turnips exhibited which are too pithy to be fit for table use. Furthermore, I have noticed that nearly all such specimens have been grown in light, sandy soil; but where the rich surface mulch has been put on, the plants have been tided and the roots quite tender. B.

THE GREENHOUSE.

THE BEST CROTONS.

THESE are grown with a view to tide over a time when cut flowers are scarce, and during the dull months they are delightful for house decorations. Plants in small pots can be used with great taste in the drawing-room or library at all seasons, and they are particularly useful for jardinières which will hold three or four or half-a-dozen plants, or they can be most advantageously used in large or small bowls for the dinner-table. There are some really brilliant colours among them, and if a good batch is raised every year, some nice plants are always available, even in 3-inch pots. These are best when the tops are what is termed "ringed," that is, the top rooted before being taken away from the plant. This is best done by preparing some peat and sphagnum moss, and after an incision is made with a knife around the bark, this material should be bound tightly around and kept well sprayed till roots are emitted through the moss all round. This does not take long if the plant is healthy and the moss kept damp. On no account must it be allowed to become dry.

The plants should then be taken off and potted immediately, placed in a small propagating-case and kept moist and close for a week or ten days, when they will be established. At no time should these plants be overpotted; it is really surprising how big a plant can be grown in a small pot with care in watering and feeding. On the other hand, it is notorious what wrecks can soon be made of them by injudicious handling.

Very good varieties are among the following. Some well-known old favourites still hold their own when well grown. Queen Victoria, orange yellow, broad leaves; Lucy, narrow, twisted leaves, green and crimson; Weismannii, long, drooping leaves, variegated green and yellow; Warrenii, long leaves, remarkably twisted, like a corkscrew, yellow and red; Elysian, long, narrow leaves, lemon yellow and rose, very handsome when well coloured and grown; Laingii, narrow leaves, stems and footstalks red and yellow; Mrs. Dorman, yellow and crimson, very conspicuous; Aigburth Gem, leaves crimson and narrow; Mrs. Luther, narrow red leaves and of fine habit; and Souvenir de Thomas Rochford, bright red and very graceful foliage. W. A. Cook.

The Gardens, Leonardslee, Horsham.

THE SUMMER TREATMENT OF BOUVARDIAS.

MANY Bouvardia plants are spoiled every year through subjecting them to too much heat and confining them from the air. Stunted, sickly

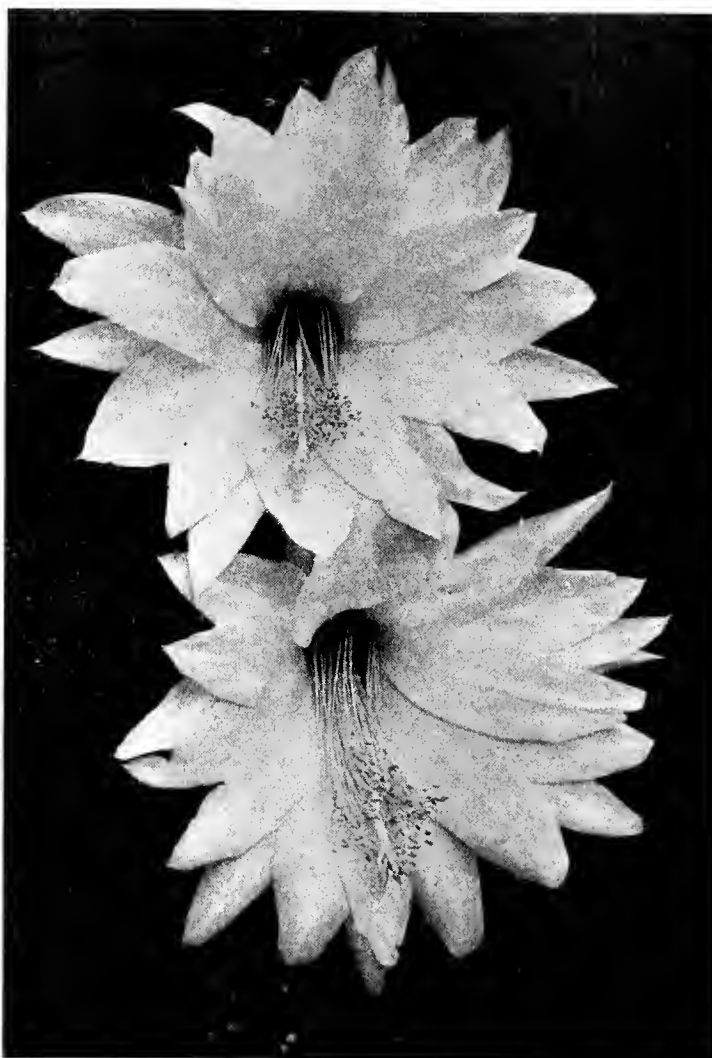
plants in large pots may sometimes be seen in a warm greenhouse. Such specimens are not worth retaining, and should be discarded at once, as it is almost impossible to bring them to a normal state of health again. From about the middle of June to the middle of September the plants do remarkably well planted out in open borders. They must be lifted and carefully repotted, and be placed in frames before the earliest frosts come. If cultivators cannot find it convenient to plant out the Bouvardias, they should plunge the pots in the border and leave them there during the period named. The soil in the border must be well

is a wise plan to stop as early in the season as possible; then the resultant new ones will have ample time to become strong and ripened. Wonderfully fine plants may be grown in the way described in one season, and bear extra large trusses of flowers. AVON.

A BEAUTIFUL WHITE-FLOWERING CACTUS.

(*CEREUS AMECAMENSIS.*)

FEW, if any, of the exhibits brought before the floral committee at the meeting of the Royal Horticultural Society on May 14 attracted as much attention as did this delightful member of the Cactus family, of which flowering examples were shown by Mr. A. Worsley of Isleworth. A cut branch was exhibited, and, judging by its appearance, the plant is, I should say, in common with other members of the genus, of a rambling habit of growth. On the specimen shown, which was about four feet in length, there were two clusters of flowers, one at the top and the other near the bottom, apparently at a joint. There were five flowers or buds in each cluster, so that it would appear to be, when fully established, decidedly free flowering. The expanded flowers are 8 inches to 9 inches in diameter, and of the purest white, except a slight green suffusion just in the centre. The petals are much pointed, hence the whole contour of the flower is very different from that of the Phyllocacti, which, in many gardens, are the only Cactaceae plants grown. A few such exhibits as this *Cereus*, and a noble *Phyllocactus* which was shown at the same time, should serve to rescue some of these delightful flowering plants from the obscurity into which they have now fallen. H. P.



A BEAUTIFUL WHITE-FLOWERING CACTUS (*CEREUS AMECAMENSIS.*)

HOW TO GROW THE STREPTOCARPUS.

MANY greenhouses and conservatories attached to dwelling-houses are partially shaded, and, of course, in such structures it is a very difficult matter to keep up a continuous display of flowers, as many kinds will only bloom sparsely in the circumstances. The *Streptocarpus* will, however, grow and flower

freely in partial shade. The plants are, moreover, very suitable for placing in groups on the floor of a house; and as there has been a great improvement in the strains during the past few years, there is added inducement to grow a batch of plants. The resultant seedlings from seeds sown early in the spring are now well advanced, and they must be given pot culture. It is not wise to disturb the seedlings too soon, because, as a rule, they form one large leaf first, and it is immediately under this leaf that the strongest roots grow. If lifted from the seed-pan too soon, the growth of the large leaf and the roots is arrested for a time.

It will be advisable to stop the shoots at least once while the plants are growing in the open air. The longest shoots must be stopped first, and it

These plants will flower during July, August and September; but it is best to pinch off the flower-stems from a certain number of the plants, and so secure extra fine flowering specimens the next year. The best compost is one made up of fibrous loam two parts, leaf-soil one part, sand and rotted manure one part. Use very clean pots and crocks, and press the soil gently around the roots of the young plants so as not to bruise them. Give water at once; then place the plants on a bed of ashes or shingle on the stage of a greenhouse. After the first watering be very careful not to apply too much, but on every fine day syringe the pots on the outside twice; this treatment induces quick root-action. Repot the plants as required, and those denuded of their flower-stems for next year's display must be grown in a cool frame during the months of July, August and September.

SHAMROCK.

TREES AND SHRUBS.

HARDY AZALEAS.

IT is difficult to imagine a more pleasing feature than a well-placed and well-flowered group of hardy Azaleas, for the colours of the flowers are so bright and varied that they appeal to everyone, while they retain a delicacy which does not offend the most sensitive nature. In addition, the majority are deliciously fragrant, their perfume scented the garden for a considerable distance.

Unfortunately, they are not everybody's plants, for they may only be grown successfully in places where lime is not prevalent in the soil to any great extent. Azaleas at Kew have for long been one of the fairest features of the Gardens, and many a pilgrimage is made annually for the purpose of seeing them in flower. There they are massed in large beds on a lawn amid groups of mature Beech and other trees, the surrounding greenery providing a fitting setting for the central mass of flowers. Very effective also are the Azaleas at Leonardslee in Sussex and Penllergare in South Wales, where they form an extensive undergrowth to woods of Pine and other trees. Various other gardens also about the country owe a good deal of their May beauty to hardy Azaleas, and a glance at the accompanying illustration will be sufficient to show how fine these plants are in the Japanese garden at Gunnersbury House, one of the seats of Mr. L. de Rothschild.

Azaleas are no new addition to the occupants of the garden, for in some establishments they were as popular thirty or forty years ago as they are to-day; but many more people are now taking advantage of their decorative qualities than at any time in the past, and there are few gardens of any pretensions which do not include representatives of the group. The majority of the kinds grown are hybrids, the species from which they were raised being rarely met with outside botanical establishments. Several North American species and one from the Caucasus formed the basis for the early operations of the hybridist, while more

recently a species from the Far East has been made use of. Continental growers were most conspicuous in the raising of new varieties in the early days, the nurserymen of Ghent being particularly successful, so much so, in fact, that the whole group of hardy Azaleas came to be known as Ghent Azaleas, a name which is retained in some quarters to the present day. Very little behind the Ghent raisers were several English firms, Messrs. Waterer of Knap Hill and Messrs. Cripps of Tunbridge Wells being among the pioneers in the movement, and to these firms we are indebted for some of the handsomest kinds. Messrs. Waterer being specially interested in the raising of red and other rich-coloured flowered kinds. In the early days many of the varieties or hybrids were given distinctive names, and even now such

or so later, their best time being mid-June. Crossed with other varieties, a number of late-flowering kinds have been produced which prolong the flowering season over a period of several weeks. *A. viscosa*, the Swamp Honeysuckle of North America, is the latest of all to bloom, its flowers often being in good condition in July.

The Caucasian *A. pontica*, which is correctly *Rhododendron flavum*, is a free-growing, fragrant, yellow-flowered species. Crossed with *A. calendulacea*, it has produced a number of the more vigorous yellow and orange coloured kinds. It blooms with *A. calendulacea* and *A. nudiflora* in May.

From China and Japan we have the highly ornamental *A. sinensis*, or *A. mollis* as it is frequently called, which has become so popular of



AN EFFECTIVE GROUP OF AZALEAS IN THE JAPANESE GARDEN AT GUNNERSBURY HOUSE, ACTON.

kinds may be obtained; but, as a rule, it is not necessary to purchase named sorts to form a showy collection, for among mixed seedlings all sorts of coloured flowers may be obtained. Some nurserymen make a speciality of one or more particular kinds; others cultivate all sorts.

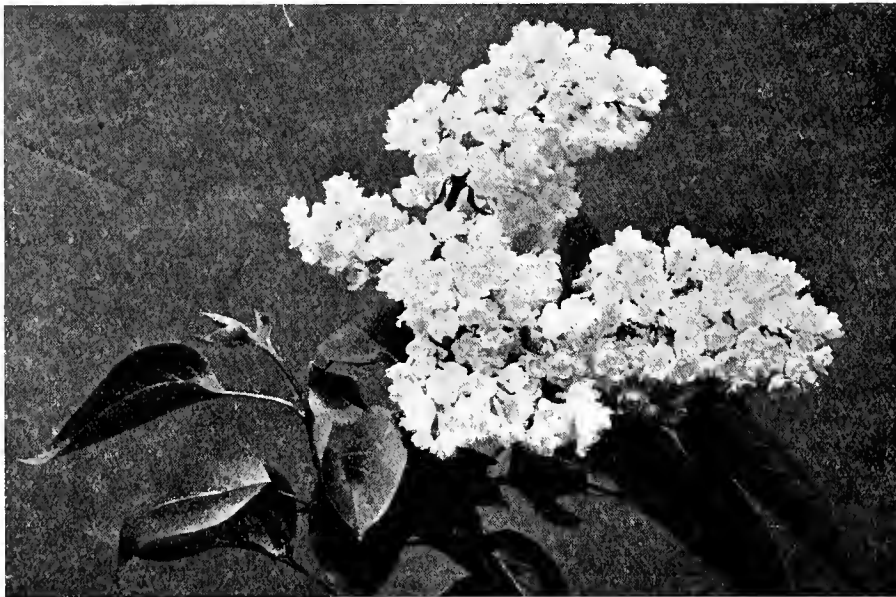
The American species which have entered into the production of the garden Azalea are *A. nudiflora*, *A. calendulacea*, *A. occidentalis*, *A. arborescens* and *A. viscosa*. Of these the former two have taken a greater part than the other three. From *A. nudiflora* many white and pink kinds and varieties with delicate shades of colour have been obtained, whereas the blood of *A. calendulacea* can be traced in sorts with red, scarlet and orange scarlet flowers. *A. occidentalis* and *A. arborescens* have white or pink flowers. They are taller and more upright in growth than the other kinds, and bloom a fortnight

late years for forcing. The flowers vary in colour from cream to orange and from pink to scarlet and red. The various varieties may be distinguished from the American and Caucasian kinds by reason of the larger and more shapely flowers and the absence of fragrance. Blossoming earlier than the other kinds, it is less useful for general outdoor work, for the flowers are sometimes killed by late frosts. Hybrids are, however, being raised between it and later kinds which stand better. Nevertheless, it is a most beautiful and popular kind for forcing.

In addition to the value of the flowers, Azaleas have another asset, for the foliage colours brilliantly in autumn. Although still spoken of as Azaleas, all these plants are now, strictly speaking, *Rhododendrons*, Azalea not being a recognised genus.

WHITE LILAC WITH DOUBLE BLOSSOMS.

A VARIETY of the Lilac with double white flowers is mentioned by Loudon, but for the improved varieties of the present day we are indebted to the firm of M. V. Lemoine et Fils, Nancy, France. It is now about thirty years since M. Lemoine distributed the first of his seedlings, and from that time onward numerous varieties have been sent out from the same source. Of the white-flowered kinds, that herein figured, Miss Ellen Willmott, is remarkable for the large size of its individual flowers, and as they are borne in massive trusses and the habit of the plant is all that can be desired, it deservedly occupies a foremost place among double-flowered Lilacs. This variety is at present not very generally known, though it was first sent out in the autumn of 1903, the price then being eight francs each. Of the older kinds, the first place must, I think, be assigned to Mme. Lemoine, which before the advent of Miss Ellen Willmott was looked upon as possessing every desirable feature.



THE DOUBLE-FLOWERED WHITE LILAC: MISS ELLEN WILLMOTT.

It is now largely grown for forcing purposes, for which it is well suited, as it may be readily flowered in a comparatively small state. It is, moreover, a very handsome shrub, as a well-balanced specimen, about fourteen feet high, near where I am writing will testify. Other good double whites are Mme. Abel Chateau and Mme. Casimir-Perier. H. P.

THE BEST MAGNOLIAS.

THE early-flowering Magnolias have been wonderfully good this season in various parts of the country. When a good selection is grown, they are extremely interesting, and extend their flowering season from March to August and September. Among the first to open are *M. conspicua* and *M. stellata*. These are perfectly studded with flowers, as is that rare variety *stellata rosea*. *M. alba superba* and *stellata* are fine for massing, and are used as such, their appearance when in bloom being splendid and resembling a bank of snow, especially when an evergreen bank of shrubs is provided as the background.

M. Campbellii is the first to open, but this is only supposed to do well in favoured districts. It does well here, and my impression is that it does not flower till it arrives at a mature age.

Other good varieties are: *M. acuminata*, which forms a tree very quickly. *M. cordata*, a North American species with yellow flowers about three inches to four inches across, is not such a free bloomer. *M. Lennéi* is a favourite, and flowers in April and May, a rich purple colour. *M. macrophylla* has enormous leaves, 2 feet long, with bell-shaped flowers of great size. *M. parviflora* has beautiful white flowers, with red stamens when the flowers are open. *M. soulangeana* and *M. s. nigra*, very dark purple. *M. tripetala*, a North American species with huge leaves and white flowers. *M. Watsonii*, similar to *M. parviflora*, but with larger blooms and very sweet-scented. *M. glauca*, a North American species, is nearly evergreen, and its creamy white flowers are produced all through August. It is sometimes called the Swamp Magnolia, as it does best in a

HYDRANGEA PANICULATA.

This hardy Japanese species is of more than ordinary value in gardens, as the flowers are not only very showy, but are produced during August and September. Compared with the months of May and June, this is a dull season with flowering shrubs in the pleasure grounds. To obtain the best results good cultivation and fairly hard annual pruning are necessary, as, when allowed to grow naturally, the panicles of flowers are much smaller, although more numerous. To obtain large panicles 1 foot in length and 6 inches to 9 inches through, fairly hard pruning is necessary in February or March. Thinning of the young shoots must also be practised, leaving only from six to ten growths to mature, according to the size of the plants. In numbers the fertile blossoms far exceed the sterile ones, but there are ample

of the latter an inch across clothing the panicles. If anything, the combination of the two renders the inflorescences more attractive than otherwise. The colour of the flowers is creamy white. In gardens the variety *grandiflora* is more generally met with than the species, being extensively grown in pots for greenhouse decoration. It is also valuable for the outdoor garden, and differs from *H. paniculata* by producing nearly all sterile flowers, while the flowering season is a month or six weeks earlier. Hydrangeas delight in a well-worked, rich, loamy soil, with a mulching of good manure applied in June. Propagation is by cuttings. A. O.

THE FRUIT GARDEN.

THE STONING AND SCALDING OF GRAPE BERRIES.

WHEN an amateur cultivator has done all he could to produce a fine crop of Grapes on his Vines, he feels greatly disappointed if many bunches are spoiled through the scalding of the berries. Some varieties scald sooner than others. The berries are most likely to scald just at the time when the stones are hardening. Directly the berries have set, a closer atmosphere must be the rule until that stage when the stones in the berries commence to harden. The hardening of the stones begins, in the case of the varieties Buckland Sweetwater, Foster's Seedling, Black Hamburg and Madresfield Court, about six weeks after the flowering stage. Alicante, Muscat of Alexandria, Gros Colman and other late-keeping varieties are about ten days later in hardening their stones. The guide here given will be helpful to inexperienced cultivators.

Now, as soon as the hardening process begins, the berries cease to swell as rapidly as before. For about twenty days there is not much perceptible difference in their size. Up to this point the flesh of the berries is very firm, and moisture must not be allowed to settle on them in excess while the sun shines on the house.

Grapes growing in a properly-constructed vinery, when well managed, rarely scald; but Vines are grown in greenhouses and other structures which are not ideal for this particular purpose, and then, with the best possible management, some berries are lost through scalding. To prevent this loss the cultivator must do one of two things without fail, namely, open the ventilators an hour before the sun shines on the house in the morning, or at ten o'clock each night open the top ventilators about one and a-half inches wide and leave them so throughout the night, increasing the ventilation before seven o'clock the next morning.

Any moisture lodging on the berries will be dispersed before the sun gains much power, and the atmosphere generally will be drier. Many berries are scalded which are never exposed to the direct rays of the sun. This is caused by a close, moist atmosphere in the house while the sun is shining brightly on it. Very early closing in the afternoon has the same bad results. Directly the berries soften naturally, the last swelling commences, and there will be no more scalding unless the house is kept closed in the daytime when the sun is shining. Ripening Grapes need a good circulation of warm air about them. No feeding must be done while the berries are stoning, but the soil should be kept in a uniformly moist state. AVON.

GARDENING FOR BEGINNERS.

A PLANT FOR THE AMATEUR'S GREENHOUSE (*CELSIA CRETICA*).

ALTHOUGH this plant has been known in the British Isles for a very long period, it is only of late years that it has become generally popular, its presence at an earlier date being almost wholly confined to those gardens where botanical collections were encouraged and plants were grown as single specimens, or in small numbers at the best, rather than as large groups. The advent of the grouping or massing system in gardens led to many plants showing themselves to better advantage than had been possible before, and *Celsia cretica* for one proved itself to be a really valuable decorative plant.

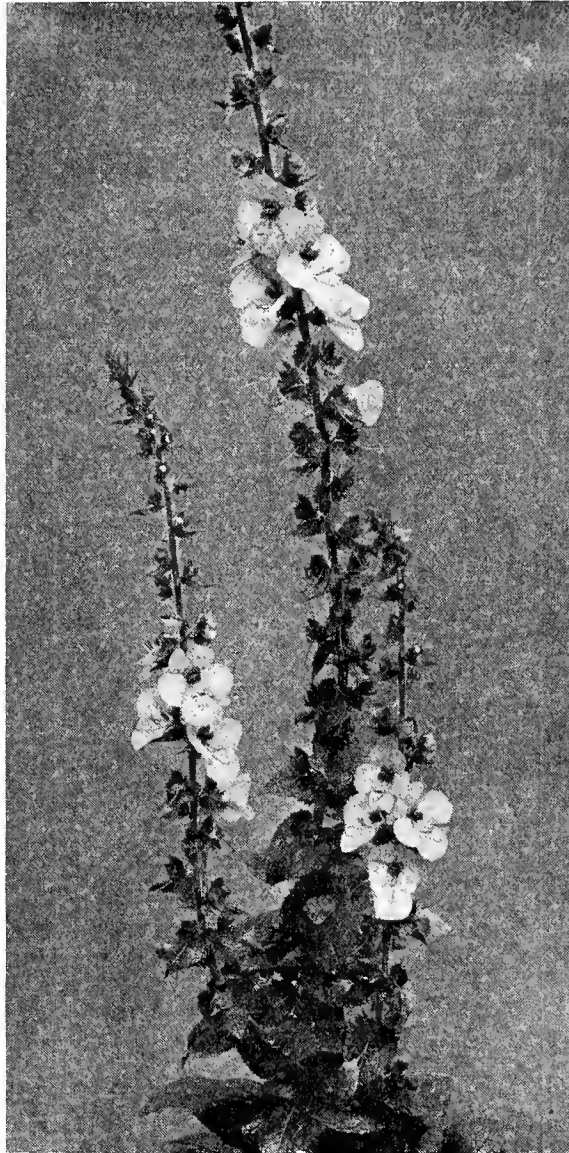
Although it may be grown out of doors during summer, it cannot be called a thoroughly hardy plant, and it is perhaps of more general usefulness for greenhouse decoration than for the embellishment of the outdoor border. It is a native of the Mediterranean region, and is strictly a biennial, although it may be treated as an annual. In general appearance some resemblance is noticeable to a dwarf *Verbascum*, the flowerless plant being represented by a rosette of green, strap-shaped leaves. As flowering-time draws near, the inflorescence appears from the centre of the leaves, and eventually rises to a height of 2 feet to 3 feet, bearing a profusion of showy, yellow flowers, the whole inflorescence being lighter and more graceful than that of a *Verbascum*.

Propagation.—This is confined solely to seeds, and by making sowings at intervals of six weeks a succession of flowers may be kept up over a considerable period. Plants from seeds sown in May ought to blossom during the following February if grown indoors, while plants from seeds sown at the end of July or early in August, and kept growing quietly, would be in excellent condition for planting out of doors when all danger of frost had gone in spring. By sowing seeds indoors in February, flowering plants for the greenhouse can be obtained for late autumn, while the same plants can be got to blossom out of doors if kept growing vigorously. Even by sowing seeds out of doors in March, flowering plants may, sometimes be had by autumn, but, as a rule, they are less vigorous and less reliable than those which were raised the autumn before.

The Cultivation of *Celsia cretica* is not attended by any serious difficulties. The seeds may be sown in a compost composed of two parts fibrous loam, one part leaf-mould, and one part silver sand. As the seeds are very small, pass the upper soil through a fine sieve and cover very lightly. A well-drained pan or box may be used as the receptacle, and the seeds must be sown thinly. As soon as the seedlings are large enough to handle, prick them off in pans or boxes an inch apart each way. When the leaves meet, put the plants

singly in 3-inch pots, using similar soil, but replacing half of the sand with well-rotted manure, such as is taken from an old Mushroom-bed. During this time a moist greenhouse temperature may be given, taking care to provide shade when the sun is

the best plants in, for if overpotted they become unsightly. When the final pots are well filled with roots, the plants must be kept going with the use of stimulants in the form of cow-manure-water, soot-water and Clay's Fertilizer. Once a good hatch of plants has been flowered, there is no difficulty in obtaining sufficient seeds for future requirements, for seeds are produced and ripened freely. Those plants which are planted out of doors should be placed from 9 inches to 12 inches apart, according to strength, and even a little more room would not do any harm. When grown indoors, care must be taken to keep the plants clean, for they are subject to attacks of thrips and red spider, and once badly infested they rarely recover; therefore it is necessary by proper ventilation, keeping a moist atmosphere, and by careful attention to watering, to keep them in the best possible health from the seedling stage onwards.



CELSIA CRETICA, AN EASILY-GROWN GREENHOUSE PLANT.

powerful in the middle of the day. Throughout summer no fire-heat will be necessary, and even in winter, except for those plants which are coming on to flower, it is only necessary to provide sufficient artificial heat to keep damp and frost away. Thorough ventilation is, however, very necessary, and strict attention must be paid to watering. Never allow the plants to become starved, but, as soon as the pots are nicely filled with roots, repot until pots 6 inches in diameter have been reached. These, as a rule, are quite large enough to grow

THE CARE OF CARPET BEDS.

ALTHOUGH carpet-bedding is not as popular now as it was a generation ago, there are many gardens in which several beds are so filled. In the first place, the plants must be so arranged that they will form a certain design. If allowed to grow untripped, afterwards the plants would soon present an untidy appearance, the leaves of one kind or variety growing and intermixing with those of others. Timely pinching of the leaves is an essential part of the work necessary to keep the plants in proper order. There must be no indiscriminate cutting off of leaves: the ends of the leaves or young shoots must be so shortened that every plant will be confined to its proper place and still have the appearance of not having been manipulated at all. Frequent—weekly—pinching of shoots and leaves is necessary, then the foliage will always retain its rich colouring. Plants allowed to grow too long before they are pinched get coarse and lose their colour very much. Odd, coarse plants must be removed altogether, and the gaps made filled with others from the reserve stock. It is always a wise plan to retain a few specimens in case they may be required at some future date.

HOW TO GROW BIG ONIONS.

A VERY large Onion, if flabby and not very firm, is really worthless. Hundreds of cultivators strive to grow big Onions, and the latter are useful for several

purposes if they are firm and well ripened. Some persons bend down the necks of Onions in order to make them bulb more quickly. It is never necessary to depress the tops of well-grown plants—they will ripen in due course naturally; and if bent too soon and violently, the inside scales are broken and the plant commences to produce young tops again vigorously. Of course, when this happens, the Onion is ruined. Keep the surface of the bed hoed and well mulched with rich manure.

SHAMROCK.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Liliums.—Keep the growing plants well supplied with water, and where the varieties are only in 5-inch pots, liberal quantities will be needed of properly-diluted farmyard manure, alternated with some good artificial fertiliser. The varieties of *L. lancifolium* are especially adapted for small pots, and their usefulness when so grown for house decoration is greatly enhanced.

Francoa ramosa.—Give the flower-spikes as they extend a neat support, and see that the plants do not suffer for the want of water. A shady position out of doors or in a cold frame on a good, firm cinder basis will suit the plants admirably. Once or twice a week, when the soil is not too dry, give some diluted manure-water. Sow seed for next season's flowering plants.

Tree Carnations.—The earliest-rooted plants will soon be ready for their final shift into 5-inch or 6-inch pots. For this compost use a sprinkling of bone-meal and a little plant food, and let the compost consist principally of good fibrous loam. Pot firmly in clean and well-drained pots. For an early display the growths should not be stopped much after the end of June. Later-struck plants should be potted on as becomes necessary, and grown as sturdily and healthily as possible. If the plants through the summer months are placed out of doors, temporary protection should be afforded in the event of heavy rains.

The Shrubberies.

Laburnums.—At the time of writing these are making a fine feature, and especially the better varieties of Laburnum, which are so distinctly superior to the old variety, and eminently suited for planting as standards on lawns and elsewhere. The following few are all worthy of inclusion: *Laburnum vulgare* Alschingeri, *L. Vossii*, *L. Parkii*, *L. quercifolium* (the Oak-leaved), and *L. Adamii*, producing both purple and yellow trusses.

Philadelphus.—The Mock Oranges for late May and early June flowering are particularly attractive. A few of the better varieties should include *Boule d'Argent*, *Bouquet Blanc*, *Candelabrè*, *purpureo-maculatus* and *coronarius foliis argenteo-variegatis*, a pretty form. A few other shrubs of special merit are *Viburnum tomentosum plicatum*, *Syringa villosa*, *Cytisus andreanus*, *Tree Lupines*, *Olearia stellulata*, *Cistus* and *Helianthemums* in variety, and *Spiræa bracteata*.

Hardy Fruit Garden.

Early Cherries.—The earliest-maturing varieties of Sweet Cherries should receive copious supplies of water, and stimulants washed down will prove valuable in assisting the crop. The fruits will soon commence to colour, and, before placing the nets over the trees, all the growths required for furnishing bare spaces and extension should be carefully and neatly tied in, the weaker ones being pinched back to form spurs for fruit-buds. Discontinue the use of any insecticide when the fruits commence to change colour.

Thinning of Fruit.—The majority of the wall trees are now advanced enough to admit of a preliminary thinning where too crowded, as it is quite evident which are swelling away freely. Where the crops of Peaches and Nectarines are light, only deformed and badly-placed fruits should be removed, any final thinning that may be necessary being done after the stoning is finished. The final disbudding should be carried out and the growths neatly tied in. Continue to syringe the trees as often as possible in the morning or evening.

Hardy Vines.—These will require attention, otherwise the growth will become congested and the bunches suffer in consequence. Avoid overcrowding, neatly and firmly secure strong shoots where required for extension, and stop the laterals and thin out the bunches where too thick, leaving only one to a spur in any case.

The Kitchen Garden.

Thinning-Out of the crops should not be left longer than is absolutely necessary, and whenever possible choose showery weather, as then the

plants do not feel the disturbance at the root so acutely.

Kidney Beans.—Make another sowing of Dwarf Beans, and also one of Runners, to succeed the earliest sown, and if the ground is dry, soak the seeds for twenty-four hours before sowing to assist quicker germination. Sprinkle the young plants with a rosed can or syringe them in the evening when the weather is warm and dry. This also has a beneficial effect on the setting of the flowers.

Parsley.—Make a sowing within the next week or so for providing the supply for next winter. Assist growing plants during showery weather with a dusting of soot, and when possible aerate the surface soil with the Dutch hoe.

Celery.—Continue to take out trenches, and plant as they become ready for succession. If the ground is dry, the plants must be well watered in.

Potatoes.—Keep the ground between the rows well hoed, and earth up as becomes necessary.

The Flower Garden.

Hoing.—This is equally as important in this branch of gardening as in any other and stimulates the growth of newly-planted subjects in a marked degree; it is especially valuable where watering cannot be carried out with any degree of thoroughness, as the frequent moving of the ground forms a loose, fine surface which acts as a mulch.

Summer Bedding.—To encourage this, and to get it established as quickly as possible, the plants and surroundings should be damped each evening and the ground well watered occasionally. Complete the staking of the plants as early as possible, and to encourage growth the flowers of many things may be removed for the first week or two.

Plants in Vases.—These are usually very effective when nicely planted with suitable subjects. The root-run, as a rule, though, is limited, and coupled with the exposure to the sun and air the soil quickly becomes dry and requires constant and careful attention. E. BECKETT, V.M.H.
Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Grafts.—These are now making growth, and where several are on one stock, the ill-placed shoots should be rubbed off and, at the same time, all the growths that have pushed on the stocks themselves.

Plums and Pears.—What is termed the breast-wood may at any time after this be removed. It is better that most of it should have been rubbed off earlier in the season, but as a rule that is neglected, and now that the rush of work for the season has lessened, it may be seen to. It is a very great mistake to shorten every shoot to a stated number of buds, because in well-furnished trees that results in overcrowding. Much to be preferred is the practice that reduced the number at once by clean excision, leaving only a sufficient number of shortened shoots to replace weakly spurs that have been removed.

Peaches.—In the North, wall trees, as a rule, do not ask in most seasons for water at the root, the Peach being an exception in some cases. Should the weather be dry, therefore, and the soil light and porous, an occasional soaking of much-diluted manure-water will be very beneficial, not only in giving vigour to the growth, but in keeping down red spider, which is often responsible for much damage to the health of the trees. Very late varieties should be lightly fruited.

Fruits Under Glass.

Lady Downe's Grape.—In thinning this variety give each berry plenty of room and leave no berries whatever in the centre of the bunches. These usually rot if left during winter.

Tomatoes.—In airy, well-ventilated structures these will require much water at the root, while in frames and low pits water must be applied with the utmost caution. Crops maturing will ripen more readily if the water at the root is limited to the merest amount necessary to keep the foliage from flagging. Late crops in cold pits should be limited to the number of trusses they are likely to bring

to maturity before November. These may be grown with the minimum of ventilation.

Cucumbers.—By removing worn-out shoots and replacing them with young ones in conjunction with means, such as repeated surfacings, of keeping up a supply of active roots, these can be kept in a free-bearing condition for a very long time. Some growers give the minimum of ventilation, but the plants seem to be less subject to collapse when judiciously ventilated in fine weather. Only a limited number of fruits should be allowed on the plants, otherwise they will exhaust themselves by overcrowding. Plants in frames may be treated in much the same manner, being particularly careful that only enough young shoots are left to fill the allotted space without overcrowding.

The Vegetable Garden.

Cauliflowers.—Sow seeds of a second-early sort for autumn cutting. In unfavourable soil sow the seeds where the plants are to remain.

Leeks.—The planting out of the main crop need be no longer delayed. Sort the plants according to size, so that the largest may be lifted for use as required. Thoroughly coat the roots with a mixture of soil and water worked into a soft mud; then lower each plant into the deep hole made with a dibber for it, so that the tips of the leaves only are seen above the ground; pour just a little water into each hole and the plants may be left to themselves. It is usual to draw deep furrows, which are afterwards levelled down when the Leeks have grown to require soiling.

French Beans.—These should be arranged so that each plant has at least one foot in the row; where closer than that, thin them, and with the thinnings make up any blanks in the rows. Runners growing as dwarf plants need much more space, and as soon as the shoots begin to run it is very important to pinch them, and to continue doing so, else they become a tangled mass which produces only a few pods compared with those that get more attention. Those trained on strings or sticks must not be stopped till they have attained the height desired.

The Plant-Houses.

Cinerarias.—The latest batch must now be provided for by sowing seeds at once. Give cool treatment throughout.

Calceolarias.—Sow seeds of these also. The seeds are so small that they must not be covered, a good way of giving the needed protection to them being to spray the surface of the compost after sowing, which settles the seeds. Then cover the receptacles and stand them in a cold frame or under a hand-glass placed in a position where the sun never reaches it.

The Flower Garden.

Watering.—If the weather be dry, Phloxes, Pyrethrums and Spiræas soon suffer; therefore apply water at once before they show signs of distress.

Pinks.—This is the proper time to propagate these by means of pipings, which are the points of the growths pulled out with a quick twitch. These are perfect without further manipulation. They root best dibbled into soil under hand-glasses the glass of which is blurred, watering the soil before placing them on; but they also root in the open, though not so expeditiously.

Stopping Plants.—There are a few desirable plants that grow so tall as to be less useful on that account. Such, for instance, are *Helianthus Golden Glow* and *H. Miss Mellish*. By topping the shoots at different times side growths are produced, the plants are dwarfer and the period of flowering is considerably extended. Some of the *Michaelmas Daisies*, if pegged down, are completely dwarfed, and such as *Aster acris* throw out innumerable flowering sprays which cover the layered stems.

Pegging.—This is as essential for some plants as staking is for others. Most of the pegs I use—and in some years there are thousands—are made of Bracken cut into suitable lengths, which are bent in the middle and both ends thrust into the ground. Next to this, Snowberry, used in the same way, makes the best peg, and is used largely for Dahlias, most of which have the shoots pegged down to dwarf the plants. *Verbenas*, *Petunias*, *Koniga variegata* and *Ivy-leaved Pelargoniums* are others which are always pegged down, but a number of plants are occasionally treated in the same way. R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE DAFFODIL SEASON OF 1912.

ONE of the many pleasures of a gardener's life is to find a congenial soul and spend a few hours in his company talking "shop" and comparing notes. It was a happy inspiration of Mr. Robert Sydenham to allow us Daffodil people to pass the evening doing this after enjoying all the good things of his Birmingham dinner. The informal talk that takes place then is one of the pleasures we look forward to when we visit the "Midland," and such is the cast of the host's spacious net that somehow or another everyone who is "who's who" in Daffodildom finds himself in its meshes. This present year the subject chosen was "The Vagaries of the Season," and our worthy president (the Rev. G. H. Engleheart) "kicked off" with one of his typical little speeches veined with serio-comicality and deep understanding. For the past twelve months, he said, we have had our weather in "big chunks"—drought and burning sun, cold and damp, then more dryness and heat—the upshot of it all being that this season "takes the cake for eccentricity."

AS THE GARDEN is one of those papers which are honoured by being kept and bound, I have asked the Editor's permission for a considerable space to record all that I have been able to find out about the season of 1912. It is an historical one, and it must needs be passed down to posterity like "the hungry forties," to tell our spiritual children what their forefathers then passed through. My notes are mainly founded on my own personal observation; but it will be seen that in several cases I have drawn upon the experiences of others, communicated either verbally or by letter.

Its Earliness.—"Coming events cast their shadows before." I was very surprised at the time—but I am not now—to get a letter from the old veteran of Ard-Cairn, Cork, quite early in the year to say that he had cut a Daffodil bloom from the open on January 16, which, in his long experience, was a record. He evidently thought I might think it one of his Irish tales, so phenomenal was it, so he sent me the flower itself to preclude any possibility of doubt. I am sorry to say I have not kept a many years' list of openings myself, but I am able to give Alert. This year its date was March 6; last year it was March 25. Perhaps as striking an instance as any that I can mention is the experience of Mr. T. Batson of Beaworthy, North Devon. He is a keen hybridist, and he puts all manner of details in his pocket-book every season. This year he began to cross on March 12; in the six previous ones his earliest date was April 8. Lastly, we have the Midland Show. Never before has it been too late for Pearson. Hardly ever, if ever, has Milner been able to stage. And, speaking of myself, my late garden has given me this year the time of my life at Birmingham. Two factors seem to fully account for this extraordinary precocity: First, the unwonted early ripening of the bulbs in 1911; and, secondly, the mild spring of 1912, when not only had we warm days for weeks together, but also almost an entire absence of frost at night-time.

The Behaviour of the Plants.—As everyone anticipated, we suffered from our unwelcome visitors of the past year. The merodon, the Daffodil fly, was then very much in evidence,

visiting gardens where he had never been before, and certainly not neglecting his old haunts, in both cases leaving unpleasant reminders of his visits. So, too, was Mr. *Fusarium bulbigenum*, after a very long absence, enticed by the great warmth of the summer; he made one of his few and far between calls, and he, too, did not forget to let us know he had been. Bulb-growers suffered severely last autumn from both of these causes. Hundreds of Mme. de Graaff and *Horsfieldii* had to be thrown away. In my own case some imported *Barrii* conspicuus and some English-grown Mme. de Graaff were the special sufferers from the fungus, but I could see traces of it in the planted bulbs. Some newly-bought *Venus* and some home-grown *Jaune à Merveille* were the worst, but I traced it in a few other kinds—just odd bulbs. The Rev. T. Buncombe sent me foliage of one of his *Poets* which prematurely turned yellow and then went brown; and I had letters from Mr. W. F. M. Copeland, Mr. Ormston Pease and others telling of similar experiences. Quite lately I have been wondering if all this was not the result of *Fusarium*. The appearance of the foliage and the bulbs of my own *Jaune à Merveille* have suggested the idea. With regard to the merodon, it seemed to pick and choose its varieties. *Doris* was very bad here, and there were one or two others to which it paid too much attention. I have an idea that it goes most of all where the flowers are left on and not gathered. I must have many hundreds of thousands of bulbs, and each year every one is taken up and cleaned, so that it is fairly easy to detect the merodon. We possibly might find an odd one or two in an ordinary autumn, but it was different last time. This visitation was universal. Growers who had never had it before had it then, and all over Britain grub-containing bulbs must have been planted; and we see, or do not see, the results now in blanks or wretched leafage. Yellow stripe has been unusually prevalent. It has appeared in gardens which previously knew it not, and on varieties which heretofore were thought to be immune. I cannot say I expected it, but I ought to have done. Poor things! the cold, water-logged soil in which everywhere bulbs had to pass the winter and the early weeks of spring quite account for it. I for one do not think it is infectious. It is only a sign that they have to live in a soil or an atmosphere which they do not like. Environment affects bulbs as it does human beings. Another noticeable feature which occurred in practically more or less every variety was the non-bursting of the enveloping sheath of the leaves. It hung on till they were ever so high, and my men had to spend a very considerable time liberating them. The effect was distorted and brittle foliage, giving the plants an untidy look. I wonder what caused it—the membrane of the sheath being too strong or the leaves being weaker than usual. I am inclined to think it must have been the latter cause, for flower-stems were unusually floppy this year. Instead of holding themselves rigid and upright, many bore their flowers in a graceful curve, like the bells on springs which we fasten to our doors and shutters when nocturnal visitors are believed to be in the neighbourhood. A last feature to be mentioned is the abnormal splitting up of bulbs, especially in certain varieties that are addicted to it. When such things as *Lucifer* and *Seagull* were lifted last season, the increase was noticed to be quite abnormal. In some varieties it was not so obvious as in others, but when we came to the leaf period of the present year, both under glass and in the open, every now

and again we saw a great number of narrow, puny-looking leaves some clustering round a fairly normal plant, others all by themselves. What is the meaning of this? Is it a suggestion of Nature? I mean, is there any correlation between this and the usual behaviour of bulbs in the difference which a hotter and lighter and a cooler and heavier soil makes to their increase? Naturally, the flowers from the much-divided-up bulbs were either fewer in number (*Lucifer*) or smaller in size (*Seagull*).

JOSEPH JACOB.

(To be continued.)

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Miltonia vexillaria Snowflake.—A pure snow white *Miltonia* with just a faint tint of yellow in the centre. The individual flowers were about four inches across, with an average of six to each spike. The plant in question carried thirteen spikes, and so admirably had it been grown that it was also awarded a cultural commendation. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

Elæocarpus reticulatus.—This is one of the most ornamental of a small yet beautiful genus of greenhouse flowering evergreen shrubs, and one that should prove of much value for the cool conservatory or like place. The small examples shown were 2 feet or so in height, bushy and freely branched, and flowering practically from base to summit. The branches extend in a sub-erect manner, and from their under sides depend graceful racemes of deeply-fringed flowers a third less in size than *Deutzia gracilis*, and borne with a freedom and profuseness akin to that well-known plant. The flowers are white, and have the hard, crisp touch of some of the Everlastings. This charming plant is not new, and is one of the many delightful subjects of which Messrs. Veitch appear to be the only present-day guardians. Not for a long time have we seen anything more distinctly beautiful than this pretty plant. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

AWARDS OF MERIT.

Delphinium Dusky Monarch.—The colour is violet purple; the individual flowers are large and with a dark centre; the spike very handsome and well formed. From Messrs. Kelway and Son, Langport.

Carnation Queen Mary.—This is the handsome and powerfully fragrant *Carnation* selected by Her Majesty the Queen at the time of the Coronation last year from a basket of seedling varieties grown and supplied by the raiser, Mr. Blick. In the matter of fragrance the variety is a revelation, and probably quite unique. It is a seedling, through several generations, of the highly-popular *Lady Hermione*, and, like it, a plant of great vigour and freedom. The colour is salmon rose.

Carnation Attraction.—A snow white variety of great purity of tone and splendid petal quality. This handsome variety has perfectly symmetrical flowers, and should figure well on the exhibition board. These two fine novelties were exhibited by Mr. C. Blick, Warren Nurseries, Hayes, Kent.

Silene Hookeri.—Quite recently this delightful Californian alpine has again come into prominence after an absence of years. The flowers are large, with deeply-lacerated petals, which are coloured rose and striated with white. The plant is very dwarf; the leaves, and indeed the whole plant, is

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices : 20, Twickenham Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Holyrood Palace Gardens.—By command of the King, the gardens of the Royal Palace of Holyrood, Edinburgh, are again to be open to the public on the Mondays of the summer months. They were open on Monday, June 17, and this will be continued till the end of September, the hours being from two o'clock till five o'clock. The privilege has been largely taken advantage of in former years, and the gardens, which are under the care of Mr. Smith, are now looking well for the season.

A Good Early Pea.—A culinary Pea that has given a good deal of satisfaction this year is Carter's Eight Weeks. Sown in the open garden on February 15, and given only ordinary treatment, pods were ready for picking on June 5. A row 6 yards long has already yielded two pecks of well-filled pods, and at least another peck will be gathered before this note appears. The pods are of good size, and in nearly every instance are borne in pairs. The quality, too, is excellent, and we regard it as an early Pea of considerable merit and worthy of extended cultivation.

Variation in Sweet Peas.—Mr. Cuthbertson recently brought examples of Sweet Peas before the scientific committee of the Royal Horticultural Society which he thought showed reversion to original forms. In the white waved variety (Etta Dyke), in the waved cream variety (Dobbie's Cream), and in the pink and white bicolor (Mrs. Cuthbertson) he had found a deep purple-flowered plant—one in a thousand, perhaps—giving a colour approaching that of the wild Sweet Pea, but retaining the waved formation. Mr. Cuthbertson also showed Sweet Pea leaves with some of the tendrils becoming leafy, the result possibly of high cultivation.

Primula Unique.—This is a charming *Primula* derived from intercrossing the two well-known Chinese species *pulverulenta* and *cockburniana*. The cross has been made both ways, and there is scarcely any difference between the seedlings, excepting when *pulverulenta* was the mother plant; then an occasional seedling had slightly darker flowers. It is fairly intermediate in character, but it retains the perennial habit of *pulverulenta* and a certain amount of its vigour, while the orange colour of *cockburniana* is reproduced in no small measure. The result, so far as colour is concerned, is a pleasing rosy red, and quite distinct from any other hardy *Primula* in cultivation. A similar plant known as the Lissadell hybrid has been raised from the same parents. The best effect is produced when a batch of about a dozen plants are arranged together. A shady, moist spot should be chosen, but where it is not too wet during the winter months, for a great many *Primulas* die from this

cause. *P. Unique* was originally raised by Messrs. Veitch of Chelsea; but since then Messrs. Bees, Limited, and other firms have taken it up, and now strong examples can be bought for a small sum.

Sir Alexander Cross, Bart.—The honour that has recently been conferred upon Mr. Alexander Cross of Glasgow is received with gratification throughout the horticultural trade. The new baronet is the senior partner in Messrs. Alexander Cross and Sons, the well-known chemical manufacturers, who have placed on the market insecticides of great horticultural value. Apart from a successful business career, Sir Alexander gained prominence as a politician, representing the Camlachie Division of Glasgow for eighteen years, retiring in 1910.

Lieutenant-Colonel Sir David Prain.—The announcement of the honour of knighthood recently conferred upon Lieutenant-Colonel D. Prain, F.R.S., will be received with feelings of the greatest pleasure by his many friends both at home and abroad. Sir David Prain is an ardent botanist and horticulturist. He was formerly Superintendent of the Calcutta Botanic Gardens and Director of the Botanical Survey of India. His publications of the botany of India are numerous and critical. Since 1905 he has been Director of the Royal Botanic Gardens, Kew.

A Rare Calceolaria.—There is flowering in the Temperate House at Kew a remarkably distinct and rare Chilean species named *Calceolaria cana*. When not in flower the growth and appearance of the plant are suggestive of a *Stachys* rather than of a *Calceolaria*, for it is only some three inches in height, with short, white, densely woolly leaves. The flowers are borne on slender scapes 1 foot to 15 inches in height. The colour of the small blossoms is pale purple or rose on a white ground, with darker purple blotches and yellow markings in the throat. A feature of *Calceolaria cana* is the delicious Violet fragrance of the blossoms.

Dipteronia sinensis.—This is a deciduous bush or small tree recently introduced from Central China by Mr. E. H. Wilson. *Dipteronia* is a monotypic genus nearly allied to the Acer or Maple family. A bush some eight feet in height is at present flowering for the first time near the Refreshment Pavilion at Kew. The small greenish white flowers are freely borne on pyramidal panicles. These, however, are of no decorative value, the beauty of the plant for garden purposes being the highly-ornamental foliage. The largest of the pinnate leaves exceed a foot in length, and are about four inches to five inches wide. The leaflets are usually eleven or thirteen in number on mature specimens. Cuttings root freely made of half-matured growths in July and August, while layering also forms a ready means of propagation.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Choisya ternata.—With regard to the correspondence at present going on in THE GARDEN re the hardness or otherwise of *Choisya ternata* in different parts of the United Kingdom, I beg to say that in one of our shrubberies here it has been planted for more than ten years and has never been injured even with 26° of frost, while *Olearia Haastii* has been killed to the ground. I may say that neither has had any protection. — JAMES HARVEY, *Mortonhall Gardens, Liberton, Midlothian.*

A New and Noteworthy Rose.—Of all the new Roses of recent introduction, may I claim the privilege of stating *Sunburst* to be one of the most beautiful? It is a good grower, of rather dwarf habit, but carrying its blooms on substantial purple stems; the foliage as described in Messrs. Pernet-Ducher's catalogue is lovely; also the coloured illustration in the same of the blooms is "most truthful," but not quite up to the transparency of the orange and cadmium. I have just cut a lovely specimen from a plant growing in the open, and can only say I leave the popularity of this beautiful variety of Hybrid Tea to the admirer of the elegant, strong and free-blooming Rose. — CHARLES W. CROSEY, *Dorking.*

Lapagerias in the Open Air.—These plants are beautiful greenhouse climbers, and specially adapted for growing in houses with north, north-east, or north-west aspects and in positions where their wiry branches can be trained to wires under the roof glass or immediately over a path. A number of years ago, a gardener of my acquaintance planted several in a cosy corner facing the south in the open air, and trained the shoots to the walls of the mansion. The plants survived three ordinary winters without any protection and flowered the third year. I have not heard anything about them since, and would like to learn whether any of your numerous readers or contributors have had any experience with these plants as wall climbers outside. I am of the opinion that in southern counties, and with light winter protection, *Lapageria rosea* and *L. alba* may be so grown.—B. [Quite recently we noticed *Lapageria rosea* growing with remarkable freedom in the open in Mr. J. C. Eno's garden at Wood Hall, Dulwich. There is no doubt that this beautiful climber is much harder than is generally supposed.—ED.]

Rhododendrons.—On page 297, issue June 8, "Spartan" has some very interesting remarks relative to the soil suitable for the growth of these plants. I have had to deal with the cultivation of many *Rhododendrons* covering acres of ground both in northern and southern counties—chiefly in the latter—and have found them thrive well in various kinds of loam. I do not believe in putting much peat around the roots; in very dry summers the whole mass gets extremely dry, and then the lower leaves on the stems fall off in showers. Some of the best specimens I have seen were grown in sand, shingle and poor loam, with a very small amount of peat. Annual surface mulches did a lot of good in this case. In one garden in Lancashire there was a natural rockery, and *Rhododendrons* grew well among the rocks, their roots entering the crevices and permeating the thin crust of soil on the surface. The plants certainly do not like lime nor very strong clay.

They live even in the latter, but do not carry many old leaves. All soils should be deeply trenched for the plants, although they are mostly surface-rooting. Rotted cow-manure, one-half, and rough fibrous loam, one-half, form the best compost for annual top-dressings.—G. G.

A Useful Speedwell.—Under this heading you have a paragraph in your issue of February 10, in which you speak of *Veronica cupressoides* as a low-growing shrub. This is an error, but is one which is shared by many nurserymen, as is evidenced by their catalogues. The paragraph states that "it is probably as frequently met with as *V. salicornioides* as under its correct name, but there can be no doubt of the proper one." I quite agree with the last statement, but the correct name is *V. salicornioides*. Cheesman, in the "Manual of the New Zealand Flora," describes *V. cupressoides* as "a much and closely-branched,



LIEUTENANT-COLONEL SIR DAVID PRAIN, F.R.S.,
DIRECTOR OF THE ROYAL BOTANIC GARDENS, KEW.
(See preceding page.)

round-topped shrub 3—6 feet high." *V. salicornioides* he describes as "a small, much-branched shrub 1—3 feet high." I have both shrubs in my garden, and know them well. The appearance is somewhat similar, but *V. cupressoides* is a deeper shade of green, lacking the yellowish tinge which is present in *V. salicornioides*. Strange to say, I have never seen a well-grown specimen, of *V. cupressoides* in cultivation, as when planted near other shrubs they become leggy, but I have seen them growing in the shingly bed of some mountain stream, of perfect shape, forming round, green mounds suggestive of haystacks, as neat and regular as though they had been trimmed with a gardener's shears. From the localities in which it grew naturally, *V. cupressoides* should be hardy in England; but I would advise anyone growing it to plant it on a lawn or somewhere away from other shrubs or strong-growing plants, so that it could assume its beautiful natural shape. I had noticed the error some time ago, which your paragraph

authoritatively confirmed; hence these lines—
A. BATHGATE, *Dunedin, N.Z.*

The Naming of Roses.—I quite agree with Mr. Easlea in his protest against our American cousins re-naming well-known Roses, and also that the practice should be condemned by all responsible Rose-lovers. I know well the confusion that arose when Mrs. W. J. Grant was re-christened *Belle Siebrecht*, but in this case the Rose was purchased and disseminated by Messrs. Siebrecht and Wadly, and, of course, they had the right of re-naming it. But in the case of old-established favourites, such as *Antoine Rivoire* to be named Mrs. Taft seems to me to be carrying the thing too far. I can remember a Rose being sent out in America some years ago named *American Banner*. Supposing we over here had copied our American cousins and called it *Union Jack*, why, there would have been quite an uproar. I wonder what our genial friend, Mr. E. G. Hill, would have said if we had re-named his beautiful seedling Mrs. Theodore Roosevelt and called it, say, Mrs. John Burns. I hope that, as THE GARDEN has a wide circulation in America, a friendly protest from a Rose-lover on this side may have some practical result in putting a stop to such re-naming alluded to. We do not mind how many good Roses Americans raise and name, especially if of the quality of *Richmond*, *Reliance* and *Radiance*; but please, Brother Jonathan, do not claim the right to re-christen British, French or German novelties.—
ROSARIAN.

Curious Laburnums.—There are at present in the gardens of Lees, Coldstream, two unusual specimens of *Laburnum* which were purchased abroad some twelve years ago. The shrubs are about eighteen feet to twenty feet high, and are profusely decorated with long pendulous sprays, similar to ordinary *Laburnum*, of a pale shrimp pink colour. But mingled with these, at quite capricious intervals, the ordinary yellow blossom is seen, sometimes in single sprays, occasionally appearing as two or three yellow flowers on a pink spray, and on two occasions a single bloom has been found, half of which is pink, the other half being yellow; while more remarkable still, occasional bunches are seen totally different in every respect to the other two. They are exactly the colour of the ordinary *Wistaria*, but grow in a dissimilar manner to either *Wistaria* or *Laburnum*. At the end of a year or two these bunches appear to die off (several of those previously noticed having done so), but on other parts of the trees they have made their appearance, though never so numerous or vigorous as at present.—X. [The *Laburnum* referred to is a fairly well-known kind, and is correctly named *L. Adamii*. A graft hybrid between *Laburnum vulgare* and *Cytisus purpureus*, it was raised upwards of half a century ago by a French nurseryman near Paris. The habit has been practised for many years of grafting *Cytisus purpureus* upon stocks of *Laburnum vulgare*, and in one instance the peculiarity of purple and yellow *Laburnum* blossoms and tufts of *Cytisus purpureus* occurred as a freak on the grafted stem. This freak, known to scientists as a graft hybrid, was perpetuated by grafting, and was the original parent of all the trees bearing the three kinds of flowers which are now to be found. An illustrated article on graft hybrids between the *Medlar* and *Hawthorn* appeared in THE GARDEN for July 1, 1911, such hybrids are not common, although there are several well-authenticated instances. There are several fine examples of *L. Adamii* in the gardens of Syon House, Brentford.—ED.]

Rose Tea Rambler.—This fine old Rose, sent out by Paul and Son in 1903, is flowering with more than usual freedom this season, and presents at the time of writing a picture of most refined beauty, the richly-coloured salmon pink flowers having their beauty accentuated by the bronze green tinted foliage. It is an ideal climbing garden Rose, valuable alike for pergola, archway or wall. The growth is rampant, and strong canes frequently measure 8 feet to 10 feet, many of which spring directly from the base of the plant, so that little difficulty is ever experienced in keeping the plant in full vigour, and when well furnished with wood of this character, the resulting floral display is invariably great. Rose Tea Rambler belongs to the Polyantha group of climbing Roses, the flowers being borne in large clusters, and, being thinly disposed, the effect when in flower is light and graceful. It flowers during the end of May and early June, and again sparingly in autumn.—T. S.

Rosa gigantea.—Of the many attractions at Kew during the past month, one which was of special interest to a large number of visitors was the flowering of this giant Rose, as only on very rare occasions has it flowered in this country. This species was introduced from Upper Burmah by Sir Henry Collett in 1889, and ever since its introduction plants have been cultivated at Kew under various conditions; but it was not until the spring of 1910 that it flowered, when the plant in the Himalayan House produced four flowers. Again, in 1911 eight flowers opened. This spring, however, the plant flowered profusely. This, no doubt, may be attributed to the hot summer experienced last year, which enabled the wood to become thoroughly ripened. Planted out in a border and trained to one of the rafters of the house, the plant has attained a height of 45 feet, while the stem is about five inches in diameter at the base. The flowers are from 4 inches to 5 inches in diameter, of a deep buff colour in the bud stage, changing to pure white as the flower expands; the stamens are bright yellow. This Rose should not be pruned hard back, but merely have the strong, soft shoots cut out, leaving the more twiggy growths, as it is on these that the flowers are produced. *R. gigantea* is a vigorous grower, and in its native habitat grows to the top of the large forest trees, often reaching a height of 60 feet to 80 feet. Although regarded as tender, I believe this Rose would thrive in such places as South-West Cornwall and the South of Ireland.—W. T.

Exhibiting Daffodils.—I was interested to see the letter from Miss Currey in *THE GARDEN*, page 250. I have always admired Miss Currey's tastefully-arranged exhibits of Daffodils, fine flowers shown with long stems, looking as fresh as the proverbial Daisies, in spite of the long railway journey and the trip across the Irish Channel; but when she pleads for the paper collar as a harmless device and a panacea for sea-sickness and all the troubles of a prolonged railway journey, I hope we are not to conclude that she wishes us to believe that without the collars her flowers could not be shown in good condition, say, at the Vincent Square Hall; I should be sorry to think so! If several flowers of the same variety can be packed together without the need for paper collars, then surely the solitary bloom of the precious seedling can just as well travel among them as if it had been one of that variety; but my point is that these collars are used not so much to protect the flowers from injury in transit as to prevent the natural tendency of the perianth segments, in some varieties, from "reflexing." "Irritation" is not a strong enough

word to express my feelings in the matter. I have only too often seen flowers shown with these collars left on, because, if they had been taken off, the perianth segments would have reflexed so badly as to make the flower fit only for the rubbish-heap. At one of the leading shows this season I saw a flower which at once attracted my attention; it was "apparently" faultless in shape and had a perianth as flat and as round as a penny, suffused with a shade of colour I had never seen in a Narcissus perianth before—a delicate suspicion of apricot pink. I gazed in wonderment on this marvellous flower; so extraordinarily wonderful was it that my suspicions were aroused, and I took a peep behind the scenes to see how it was done. I found, as I expected, a neat, very neat, little disc of cardboard carefully placed up against the back of the perianth. This card was of just the correct depth of colour to show through the white perianth, and I can assure Miss Currey that this card served the double purpose of lending its colour to the

THE ROSE GARDEN.

THE PROSPECTS OF THE ROSE SEASON.

WITH many readers, by the time these lines are in print the Rose season will be almost in full blow; but I am aware *THE GARDEN* is widely circulated, and growers in the North have reason to rejoice that they live in those parts, especially if they are exhibitors. It is a remarkable year, one of which few can recall the equal. To see such a glare of blooms out the first week in June is to recall the times when one depended solely upon the old Gallicas and Hybrid Chinese. Most of us have received some very welcome showers, and now the buds will fill up well.

Amateurs from the Home Counties who depend solely on cut-backs will be sadly out



A FLOWERING SPRAY OF THE GIANT ROSE (MUCH REDUCED). IN ITS NATIVE HABITAT THIS ROSE GROWS TO A HEIGHT OF 60 FEET TO 80 FEET.

flower and supporting a refractory petal, which, directly it was removed, sprang back flat against the stem, leaving a very ugly hole in the side of the flower, and the imposture was revealed. If the Royal Horticultural Society or the Midland Daffodil Society would say that there was to be no more faking and no more paper collars, we might trust exhibitors in the same way that we trust them when we say that they are to show only flowers that they have grown themselves.—W. A. WATTS.

FORTHCOMING EVENTS.

June 25.—Royal Scottish Arboricultural Society's Excursion to Deeside (five days).

June 26.—Colchester Rose Show. National Rose Society's Show at Southampton. Richmond Flower Show. Royal Botanic Society's Meeting.

June 27.—Isle of Wight Rose Show at Ryde.

June 28.—Canterbury Rose Show. National Rose Society's Show. Hertford Horticultural Show.

June 29.—Windsor Rose Show. Reigate Rose Show. Bradford Paxton Society's Meeting.

of it at the "National" on July 9, unless they were able to foretell the weather we have had and pinched out the first buds of the earliest kinds. I should say that the Southampton Show on June 26, and also Richmond and Colchester on the same date, will bring out remarkably good displays. We are now having the proverbial dripping June, and I should say we are likely to see the rich-coloured Roses in grand form. It may even be a year specially good for some of the older Hybrid Perpetuals, for I have seldom seen them looking better, and many of the semi-double kinds are coming out magnificently in the cooler, moist weather now prevailing.

Even the maiden plants are coming into bloom here in Essex, so that with another month before the greatest show of the year it is to be feared many will find the date too late for them, and I think it a very wise provision of the National Rose Society to establish a show like that at Southampton; only I wish it had been in London instead.

Those growers who were well ahead in providing stimulants will be rewarded now that the rains have come; but even now we can do much to help the buds by dusting the ground with a good artificial manure and hoeing it in. A season like this has demonstrated the error of depending solely upon liquid manure, for how can one water all one's Roses as they require it; whereas in a rainy season we can apply artificials and allow the rain to do the watering for us. I am a believer in putting the food into the land in the autumn, so that the winter and spring rains can carry it down for use by the roots when required.

I have had an object-lesson this season in what may be accomplished by very moderate pruning. Last season some hundreds of Roses in a garden close by were hard pruned. This year a new gardener arrived who believes in only moderate pruning, and there is, indeed, a glorious array of bloom. As I explained to the owner, this practice might do well in alternate years, but I would not advocate it annually, or we should find that basal growth would be very meagre. Again, the retaining of the early growths is somewhat risky, because far too frequently we have late frosts that spoil all our prospects. This year there was practically nothing to do any serious harm. The Roses I allude to are growing in specially-prepared beds, made two years ago. The soil was very light, made up chiefly of old turf, leaf-soil and rubbish from the soil-yard. A cesspool close by is cleaned out occasionally and pumped straight on to these beds, the result being growth I have never seen equalled. Many exhibitors who have a goodly number of the staying Roses, like Queen of Spain and Bessie Brown, will be very glad indeed, and I imagine it will be such Roses that will be very much to the front on July 9.

Although aphid has wrought havoc to neglected Roses, those who have sprayed early and continually have been able to keep their Roses in good trim. So far, black spot has not been very much about, which is something to rejoice over, because this pest is most annoying.

The need of a public Rose garden becomes more manifest every year. Our collection is now so prodigious that it is only by some such garden, where visitors could see for themselves the various Roses growing, that they are likely to satisfy themselves. Such a public Rose garden as that at Westcliff-on-Sea is a great boon and is worth a long journey to see, and I am glad to know it has been brought well up to date with the latest novelties.

Few new Roses have pleased me more than Reliance, Mr. E. G. Hill's fine seedling. It is like a huge White Lady, with very large guard petals and warm shell pink colouring inside and yellow shadings; in fact, it seems to be a blending of

White Lady, Mildred Grant and Melanie Souper. It must surely take a great position as a show flower.

The wichuraiana Roses are now coming on fine and promise to be very effective this year. So also are the lovely little Polyanthas, and altogether, although an early one, the Rose season of 1912 will be one long to be remembered.

ROSE MARQUISE DE SINETY (H.T.).

[See coloured cover.]

This is without a doubt one of the grandest colours yet produced, and it is certain to remain a great favourite for many years to come, although there are rumours of rivals. An idea has got abroad that Marquise de Sinety is a poor grower, but this I am

fruit fragrance. I do not advise it to be grown as a standard, although it will grow in that form, but it is not so adapted to making a good head as other Hybrid Teas, such as Mme. Ravary. P.

[Our coloured cover was prepared from flowers kindly supplied by Messrs. Merryweather and Sons, Southwell, Notts.—Ed.]

THE FLOWER GARDEN.

A KASHMIR POPPYWORT.

(*MECONOPSIS SINUATA LATIFOLIA*.)

For sheltered and shady corners, either in the rock garden or border, there is no more charming plant than the *Meconopsis*, of which there are several kinds well worth growing. For shady banks among Ferns, our native species, *M. cambrica*, is a most effective plant with its wealth of yellow flowers. In such positions it may be naturalised, and self-sown seedlings usually appear in abundance. Of all the members of this beautiful family it is the best, if not the only, perennial, all the others usually dying after they have flowered. The headquarters of this family is in the Himalayas, whence they extend along the mountain ranges into China. North America is represented in the genus by one species, which is found in California, an annual with beautiful brick red flowers. The most handsome member is the *Satir-Poppywort* (*M. Wallichii*), which is well known in gardens with its 5-foot or 6-foot stems, covered on the lower portion with beautifully-cut leaves, and producing for the greater part of its length its branches of purplish blue flowers.

M. sinuata latifolia was introduced in 1906, seeds having been sent from Kashmir in the spring of that year. From a rosette of stalked, somewhat oblong leaves, with sinuate margins, arises the 2-foot stem, covered, like the leaves, with stiff, prickly hairs. When about a foot high the terminal flower, of a pale blue colour, opens, disclosing a bunch of orange-coloured stamens, in the centre of which is the ovary and purple style. After this the stem continues to elongate, and produces a succession of its beautiful flowers

on pendent stalks during the months of May and June.

A suitable companion to the above, of a similar habit, but with thinner and more deeply-lobed leaves and darker blue flowers, is *M. aculeata*. It also differs in having a rounder and shorter capsule. Another charming plant is *M. racemosa*, with long, narrow, entire leaves and deep blue flowers.

All the above plants may be successfully grown in a cool, shady place, planted in well-drained soil composed of loam with plenty of leaf-soil, as well



THE BEAUTIFUL POPPYWORT (*MECONOPSIS SINUATA LATIFOLIA*)
NATIVE OF KASHMIR.

glad to disprove, for it grows with me in heavy clay soil quite equal in vigour to Mme. Ravary, both on the hard-pruned plan. I have now growths of Marquise de Sinety fully 15 inches in length bearing grand buds, which, when they begin to show colour, are a carmine ochre colour, but as they expand they are a superb Roman ochre, shaded with bright rosy scarlet. The foliage is a most delightful reddish shade, very leathery and glossy, and of enormous size; indeed, the beauty of the foliage of this variety is only equalled by Joseph Hill. There is also a delicious ripe

as some peat to make it lighter and more spongy. Seeds must be fresh, and should be sown in pots in a cold frame or in a house with a little heat. The seedlings must be pricked off into pots or boxes as soon as they are large enough to handle. If pricked off into boxes first it will be advisable to pot them off later, as they are better planted out of pots into their permanent positions. W. I.

SWEET PEA NOTES.

Fresh Mulching.—It is not always either necessary or convenient to put down fresh mulching to the Sweet Peas; but in view of the dry weather of April and the early days of May, when artificial watering had to be done, an endeavour ought to be made to strain a point in its favour this year. For purposes of keeping the soil cool and preventing the waste of food, the old material is quite useful, provided that it is kept open and sweet by constant loosening, but it is not now giving much food. If, therefore, there is some good, rotten manure at command, spread a nice thickness after the worn-out stuff has been raked off. There can be no doubt that the plants will derive marked benefit from it in many ways before they have done blooming.

Variety in Food.—Feeding the plants will be under the most serious consideration now, and no efforts ought to be spared to afford variety. The constant application of one food to a human being does not produce the finest man or woman, for the simple reason that the body becomes satiated of the one thing given incessantly, and plants are sure to come into a somewhat similar, if not identical, state. To achieve the best reward, at least three kinds should be at disposal, and these may advantageously be applied alternately. However, it is obvious that this detail of management must be subject to the conveniences of each cultivator, who may be relied upon to do the best in his power for his plants. It is of the utmost importance that, no matter what form the feeding may take, it shall never be used when the soil is dry and never be applied strong.

Thrips.—Fortunately for the peace of mind of the majority of Sweet Pea lovers, this pest does not invariably attack the plants, because they would find in it a persistent enemy, which is by no means easy completely to exterminate when once it has made itself at home. Although it is not an occupant or visitor to every garden, the grower should ever be on the look-out for it, so that the instant one is seen it can be destroyed. It will be found to attack, and very quickly cripple, the growing points of the shoots unless it is destroyed. The application of an approved insecticide, exercising the utmost discretion that it is not used in a strong state, is permissible, but vigorous hosing and hunting will suffice if steps are taken early enough.

Disbudding.—This will continue to have the most intelligent attention, as well as regards lateral growths as blooms. The severest form of bud suppression as adopted by those who are

growing for exhibition is neither necessary nor desirable in general culture, and each cultivator must proceed on the lines that he knows will best suit his particular objects and requirements. As a rule, it is not desired to have the plants in full bloom much before the middle of July, but the dates of fixtures must be closely watched and blossom buds all removed a definite number of days before them to secure superior quality. The time will depend on the situation of the garden and the season.

Evening Hosing.—When the day has been burning with the beat of the sun, and the atmosphere has become perfectly arid, evening hosing or syringing, according to circumstances and conveniences, must have consideration. It is seldom that real harm can be done, but obviously the incessant pouring of cold water upon the soil will reduce the temperature of the ground, and thus

GARDENS OF TO-DAY.

MR. E. A. BOWLES' AT WALTHAM CROSS.

MR. E. A. BOWLES of Myddelton House, Waltham Cross, is so well known among horticulturists that no apology is needed for bringing his charming old-world garden before the notice of our readers. It was on a sunny day in early May that we responded to Mr. Bowles' invitation to spend the day with him, a day when the sun was gleaming hot and the Tulips and Magnolias were scattering their petals over the garden with a lavish haste, as though racing to keep pace with an exceptionally early summer.

We have, long ago, learned that a garden is a reliable index to the tastes and dispositions of its owner; hence, just as Mr. Bowles is a man of



A CHARMING DISPLAY OF IRIS GERMANICA BY THE WATERSIDE IN MR. BOWLES' GARDEN AT MYDDELTON HOUSE, WALTHAM CROSS.

afford a check to the action of the roots; it may also so batter down the mulching material as to render it impenetrable by water and air, and the health of the plants must inevitably suffer. It is therefore apparent that intelligence will have to be exercised in the matter if handsome benefits are to accrue. Wisely-applied water is good; if unwisely applied it is the reverse.

Green Fly.—As far as insect enemies are concerned, this is indisputably the worst with which the Sweet Pea lover has to contend; and it is quite enough to satisfy the majority in its particular direction. It is a visitor that wastes no time in making itself perfectly at home and multiplying at a rate that is enormous, and the man who would always keep the upper hand must strike early and strike hard, repeating his attacks as necessity demands. Hosing and syringing are excellent.

HORACE J. WRIGHT.

many parts, so is his garden made up of many sections. For you must know that the owner of this garden is a keen entomologist, an ardent traveller and plant-collector, an artist of no mean order, a scientist, an expert on rock plants, a keen Daffodil enthusiast, an authority on the Crocus ("The Crocus King" the late Mr. Gumbleton used to call him), a Master of Arts, a strenuous worker in the cause of horticulture, and, above all, a good amateur gardener in the truest sense of the word. Thus in his garden a raven keeps company with tame gulls, moorhens with ancient carp, entomological curiosities with the choicest plants; yet all seem to form one harmonious whole, just as the many outlets for his energy and skill combine to make a genial and greatly-esteemed man of its owner.

To deal with all that we saw of interest in the way of plants in this garden would occupy the whole

of this issue: but there were a few outstanding features that appealed strongly to us. Thus in one portion, with a flagstone pathway beneath a pergola designed for the purpose of showing plants to the best advantage, we found a number of plants of considerable rarity. There, for instance, were three of the Citrange, a cross between *Egle sepiaria* and an edible Orange. Bearing unmistakable evidence of the first-named parent, it is hoped that these will prove as hardy as it and possess the beauty of the Orange.

Here, too, was *Feijoa sellowiana*, in the open, a sturdy plant that was quite at home. How the late Mr. Gumbleton used to rave over this shrub, which he grew so well in his Irish garden! Hard by, and overhanging a garden seat, was a splendid bush, some twelve feet high, of *Solanum crispum* Glasnevin variety, its bounteous display of lilac blue flowers being exceptionally pretty on this May day.

Seedling *Eucalypti* in multitudes, *Clematis montana* lilacina scrambling over the summer-house, with its pretty pale lilac flowers, with

company with the Yews referred to by the water-side is a fine example of the Judas Tree (*Cercis Siliquastrum*), which has deeper-coloured, rosy red flowers than we ever remember seeing before. Apparently it is a variable species under different conditions.

Not far away from the water-side we come upon yet another section of the garden, and a most interesting one to boot. This is devoted to plant curios of all kinds, and the owner has certainly gathered together a wonderful array. Not only are they curious, but to the scientific mind many are of considerable interest. Here, for instance, is a "Witches' Broom" that was taken some years ago from an old Elder and started in life as a separate plant. It still retains the dwarf, herbaceous character that it possessed when attached to its parent, thus proving that the disruption of the plant-cells that took place at the outset was permanent. An Oak-leaved Laburnum and one with crinkled flowers, curious Daisies and Plantains, an Elm with twisted stem and foliage, as well as



ANEMONE SYLVESTRIS GRANDIFLORA GROWING AMONG ROCKS IN THE GARDENS AT MYDDELTON HOUSE.

golden-leaved Balm, and a gorgeous, golden-leaved Bramble that originated, we believe, in Canon Ellacombe's garden, were all to be found in this one little section of the gardens at Waltham Cross. Near by, and standing beside an old-world pond, was a fine specimen of the new *Viburnum rhytidophyllum*, with its long, leathery leaves and huge corymbs of creamy white flowers.

Flowing through the estate at Myddelton House and right through the gardens is the artificial river of the New River Company, and a portion of this, bordered with white and other German Irises, is seen in one of the accompanying illustrations. It is an effective grouping of these plants, which have been in this situation for a number of years. Flanking the river are some fine old Yew trees which must be many hundreds of years old, and on the lawn is a magnificent specimen of *Cedrus atlantica* that was planted by Mr. Bowles' great-grandfather just one hundred years ago. Keeping

hosts of other interesting plants, find a home here. Near by, on one side of a lawn, is a fine standard plant of *Wistaria multijuga*, with pendulous racemes 3 feet long of pale lilac flowers; an ideal way to grow this charming native of Japan.

Yet another section of the gardens Mr. Bowles has devoted to experiments with grey-foliaged plants and purple flowers, and the latter, at the time of our visit, were most interesting on account of the beautiful Darwin Tulips that were blooming. These, Mr. Bowles informed us, were selected for the purpose by our esteemed contributor, the Rev. J. Jacob. After much earnest meditation on the part of that gentleman, he advised, first of all, one named The Bishop, just as a dutiful parson should do, and in this case The Bishop has certainly justified its recommendation. It is the most lovely purple Tulip we have ever seen, and if money will buy them, some bulbs will find a home in our garden this autumn. It is of pale purple shade, tall

and sturdy. Faust is deep black purple; Duke of Westminster, very large, deep purple with white eye; Grand Monarque, very good deep purple; and Gruze is a magnificent Tulip of glowing hue, a little deeper shade than The Bishop. Those who want to plant purple Tulips this autumn may rely on all of these. We must ask Mr. Jacob to write some articles at planting-time, giving some good selections of Tulips according to their colours. Near by we noticed groups of a little *Viola* that seems to crop up everywhere in the gardens, and which we find is named, among those who know it, Bowles' Black. It is a really charming little Pansy, almost black in colour, with small yellow eye, and a very pert pose indeed. Eremuri are great favourites with Mr. Bowles, but this year the frosts and drought of late spring created havoc among them, so that they were not up to their usual standard.

The rock garden, which is reached by the foot-bridge shown in one of the illustrations, is one of Mr. Bowles' pet hobbies, and is of very great interest indeed. He has filled it with all the choicest plants obtainable; but, unfortunately, lack of space will not allow us to enter into details of these. We must, however, mention the beautiful cluster of *Anemone sylvestris grandiflora*, shown in the illustration on this page; *Berberis Fremontia*, with its blue foliage and crimson young shoots; as well as a number of beautiful blue seedlings of *Camassia Leichtlinii*. Indeed, one of the greatest charms of the whole of these gardens to us, and also to the owner and his numerous gardening friends, are the many kinds of seedlings of all genera that are constantly cropping up. The variations that Mr. Bowles finds among these are alone well worth allowing the self-sown seedlings to grow, although it is scarcely necessary to add that they need thinning with a ruthless hand when their merits or otherwise are determined. Such, then, is this garden of many parts; an old-world garden so near to and yet so far from London, where Mr. Bowles' Huguenot ancestors centuries ago settled and founded their home.

THE FRUIT GARDEN.

FRUIT TREES AND RED SPIDER.

THE branches of fruit trees trained on walls, either nailed or fastened to wires, are warmer and drier than those growing in the open border, throughout the summer months. The leaves on the wall trees very rarely get soaked and well washed with the rains like those in the open quarters, so that the general conditions are highly favourable to the spread of red spider. Of course, it is advisable to syringe the foliage of wall trees frequently and so cleanse them; but it is a very difficult matter to keep down red spider in dry, hot spells of weather by this alone. Soot, judiciously used, is a good preventive; a small quantity in a fresh state should be scattered on the soil at the foot of the wall. When moistened, the ammonia arising from it renders it very distasteful to red spider, which cannot thrive on the leaves immediately above it. Gently water the soot with a fine-rosed watering-can every two days or so in the absence of rain, and renew the soot every ten days. I have used it under Peach, Nectarine, Apricot and Pear trees with great success, the leaves of the trees being much larger and of a deeper colour than those on trees not so treated. SHAMROCK.

TREES AND SHRUBS.

RHODODENDRON KEWENSE.

THE accompanying illustration directs attention to a large-growing, showy *Rhododendron* which originated at Kew thirty years or more ago. Growing to a height of 10 feet or 12 feet, it is of vigorous habit and bears large oblong leaves after the manner of *R. griffithianum*. The flowers are borne in May, several appearing together in loose clusters about the time that the young growths appear. They are large, very fragrant, and white suffused with rose in colour, one variety having rose-coloured blooms. The young shoots are protected with good-sized rose-coloured bracts, which add to the effect of the plant at flowering-time. Unfortunately, no record was kept of the species used at the time the cross was made, and although the parentage has since been suggested to be *R. griffithianum* (*R. Aucklandii*) × *R. Hookeri*, there would appear to be some doubt about the matter, for both of those species have scentless or almost scentless flowers, whereas the fragrant blossoms of *R. kewense* are one of its chief attractions. It would appear that the fragrant *R. Fortunei* might more readily be one of the parents, for it is hardier than either *griffithianum* or *Hookeri*, and stands well out of doors in the neighbourhood of London, *kewense* doing the same, whereas *griffithianum* cannot be depended on, and it is doubtful whether *Hookeri* would stand, could it be obtained to make the trial. As *R. kewense* blooms and begins to grow rather early, it is advisable to give it a position sheltered from the early morning sun, so that in the event of a frost occurring in May its harmful effects may be minimised. By the introduction of a series of first hybrids, such as *kewense*, *Luscombeii*, *Manglesii*, &c., among the better-known garden varieties, the *Rhododendron* garden may be made of more general interest, while no more trouble will be added to cultivation and upkeep. Although *R. kewense* was raised over a quarter of a century ago, it still remains one of the most beautiful *Rhododendrons* in cultivation.

THE VIRGINIAN SNOW-FLOWER.

(*CHIONANTHUS VIRGINICA*.)

THIS is an interesting subject now flowering with wonderful freedom. The Virginian Snow-flower, or Fringe Tree as it is commonly called, is by no means a new addition to gardens, though it is not commonly met with; it was introduced at the latter end of the eighteenth century. It does well as a bush against a low wall, also as a small tree in the open shrubberies, and appears hardy enough

in both positions. It belongs to the deciduous section of our flowering shrubs, the leaves being lanceolate, glabrous and opposite, the petioles being much darker in colour than the leaves or other part of the stem. The flowers are produced in racemes fully 6 inches long, and cannot fail to be recognised.

Each flower has four strap-shaped petals fully an inch long and exceptionally narrow, purest white in colour when fully open, each blossom being borne on a fine stalk. This shrub, a native of North America, must not be confused



RHODODENDRON KEWENSE, ONE OF THE MOST BEAUTIFUL HYBRIDS YET RAISED.

with *Chimonanthus*, so nearly spelt alike, but, of course, totally distinct.

A NEW HONEYSUCKLE.

(*LONICERA THIBETICA*.)

THIS shrubby Honeysuckle was introduced, among others, by Mr. E. H. Wilson, and has this spring flowered with us for the first time. Apparently an excellent doer and perfectly hardy, it has developed into quite a large bush with long pendulous growths. The flowers, which are produced on the young growths, are of a pleasing lilac shade of colour and deliciously fragrant, mostly produced in pairs on a short, thick footstalk, but occasionally with a much smaller and later flower closely set between them. The flowers are about half an inch in diameter, quite tubular, and remain in good

condition for a considerable length of time on the plant. The growths are long, drooping in habit, and deciduous. The leaves are small, and the reverse is covered with a pale tomentum. Generally, these are produced in whorls of three on very short petioles, but occasionally one finds a branch with four at each interval.

A HANDSOME CLIMBER.

(*LONICERA CILIOSA*.)

THIS is one of the most handsome plants we have just at present, occupying a pole in the shrubberies, which it clothes perfectly with its twining growths, and is now covered with its trusses of deep orange yellow tubular flowers, which remain in a fresh condition for quite a long time. The plant, I suppose, derives its name from the leaves being ciliate, *i.e.*, the margin surrounded with fine hairs.

Elstree.

E. BECKETT.

A LITTLE-KNOWN DAISY BUSH.

(*OLEARIA MYRSINOIDES*.)

THE genus *Olearia* comprises a large number of handsome ever-green shrubs, all of which inhabit Australia and New Zealand, where they are commonly known as Daisy Bushes. While the majority of the species thrive and flower freely in the open air in the warmer parts of the British Isles, there are not more than three which can justly be classed as hardy in the London district. Of these the well-known *O. Haastii* is frequently met with in gardens, and is, perhaps, the most valuable of all as a town shrub. *O. macrodonta* is also a very attractive species; but while plants will come through an ordinary winter unharmed, it is liable to injury during very severe weather; therefore it is best treated as a wall shrub. Another valuable species is *O. myrsinoides*, and is undoubtedly the hardiest of the genus. Introduced from Australia over seventy years ago, it is surprising that it is not more generally cultivated. The plant forms a low-spreading shrub from 2 feet to 3 feet high, with small Holly-like leaves, being deep green

and glabrous above, while the under surface is densely clothed with a silvery tomentum. During May and June the flowers are freely borne in clusters along the slender growths, often forming a spray 2 feet or more in length. Individually, the flower-heads are about an inch in diameter, pure white, with a yellowish disc. *Olearias* are among the easiest of shrubs to manage, and while they will grow in almost any soil, they thrive best in a fairly light, well-drained compost. Most of the species may be readily increased by cuttings of the half-ripened wood inserted in pots of sandy soil during the autumn months. Considering the ease with which these beautiful shrubs are grown, it is surprising they are not more often seen. One of the most interesting groups at the Royal International Exhibition was a collection consisting of thirty-three distinct

species of *Olearia*; these were exhibited by Captain Dorrien-Smith, for which he was awarded a gold medal.

W. T.

THE DAFFODIL SEASON OF 1912.

(Continued from page 311.)

Are There Two Yellow Stripes?—I have had numerous letters telling of leaves marked with yellow stripe, or with something near akin to it, and some say that by spraying with appropriate liquids they have got the evil under, suggesting as a corollary that the cause is a fungus. If there are two yellow stripes, both have been very much in evidence during the past season.

Mr. W. F. M. Copeland writes: "I cannot make out about the disease at all. If it is not a fungus, why does it spread as I have seen it do? If it is weakness, why does it show it if the bulbs are replanted in different soil and in good soil well limed?" If I understood Mr. Engleheart aright in a remark he made at the Birmingham post-dinner note-comparing, he thinks there is only one yellow stripe, and it is caused by the plant having to live in some unsuitable environment of soil or climate. This, at any rate, is my view, and I am now going to explain the above experiences according to my theory. First, the natural growth of the plant may easily be mistaken for the beneficial effect of a fungicide. I have repeatedly noticed that in a full-grown leaf the bottom part is not nearly so much affected as the upper half. This year, for example, one of my King Alfred patches was simply awful when it was 3 inches or 4 inches high. Later on it was nothing like so bad; in fact, the parts of the leaves that Nature had allowed to remain underground until a more genial time prevailed have very little of it. Now, suppose I had sprayed when my leaves were 3 inches or 4 inches high, I might readily have ascribed the after-improvement to that, whereas it was only the natural order of things. Secondly, I do not expect

"different soil" or "good soil well limed" to work a miracle. And this it would be doing, in my opinion, if the change was "yearaneous," let alone "instantaneous." I am thankful to say I have never had blood-poisoning myself, but those who have had it have told me that their medical advisers have invariably told them to be extremely careful for three or four years. There seems to be something of the original trouble left in the system for that length of time. Just so with "yellow stripe." A plant must be given time to get out of it. Some are able to throw it off quicker than others, but I never expect the change to take place *instanter*. Give it time, even when the plant has been transferred to pastures new.

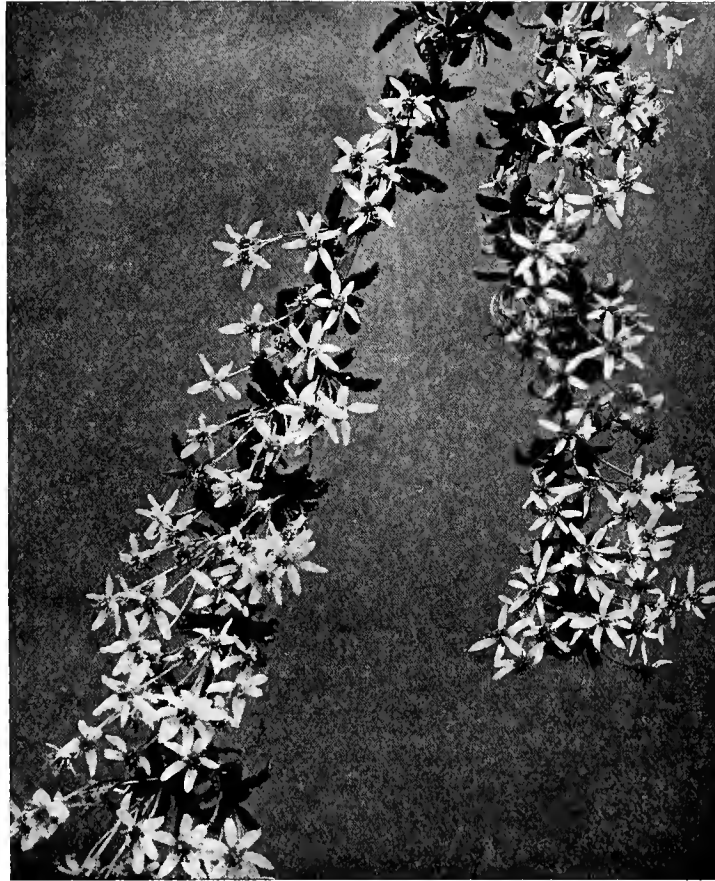
Sickle-shaped Leaf.—All Daffodil-growers know this appearance. There is often a sickly yellow

look about the leaf as well. In the earlier part of the forcing season it is not infrequent in pot-grown material. I have heard of a good deal of it this last season, both under glass and in the open. In my opinion it is largely due to a mechanical injury resulting from the sheath not working as it should do, although I do not altogether quite see why this should induce the sickly look I have referred to above. In pots it (the yellow look) seems to have some connection with the ripening of the bulb in the previous year. Late-ripened bulbs, if they are forced before their time, are very subject to it. In this connection, by the way, may I say that I notice in Messrs. E. H. Wheadon and Sons' (of Guernsey) list for 1912 that attention is drawn to the virtue of early ripening for early

was altered. A clergyman in Ireland writes that he had Grandee in bloom before either Lord Roberts or Weardale Perfection. Reference to colour will come under this head. In most districts it was decidedly above the average, but this was not the case with me. I never saw Albatross so pale, while precisely similar bulbs grown under glass had brilliant red edges to their cups. Bernardino is usually much deeper and Blackwell ditto, than they were this last spring.

Seed-bearing in 1912.—I am told that all except trumpets have given but little seed. Luckily for me, we settled last autumn to devote this season specially to them, and nearly all my seed-bearers are either trumpets or their next-door neighbours, giant Leedsis. My seed crop promises to be good, but bearing out what I am told, a fair-sized block of Princess Mary will hardly give me half-a-dozen pods. The few Poets, too, that have been hybridised have been most disappointing.

More Personal Matters.—When writing my little book on "Daffodils" this time two years ago, I devoted the last paragraph to white triandrus hybrids, and advised everyone to try to either acquire or raise some for themselves. Ever since my liking for these lovely refined pure white marble-like flowers has increased, and this last spring has still further intensified their cold beauty in my eyes. I am glad to say that they have now made their *début* in trade lists, and that many can be had for quite small sums. The very best are still dear, but as they are easy to raise from seed, I anticipate a rapid increase in their numbers and a corresponding lowering of prices. I am told that the pollen of calathinus gives much more satisfactory results, both in size and constitution, than the ordinary triandrus albus. Recipe for obtaining the same: Procure some good Leedsis or similar varieties, such as Albatross, and also some triandrus calathinus. Transfer pollen of the latter at the proper time to the stigmatic surface of the former. Collect the seed when ripe and sow in the July following. The lovely Alabaster, May Hanson and Maid Monica came from Minnie



A HARDY JUNE-FLOWERING DAISY BUSH, *OLEARIA MYRSINOIDES*.

pot culture. I never remember actually seeing it in print in a bulb catalogue before, but it is an important point, one well worth a little consideration.

Topsy-turvy in 1912.—I have had surprising results. Many varieties have turned a somersault in their behaviour. The bad have been good and the good bad. For example, Seagull was good and small, Lucifer shy, Torch about half its usual size, Evangeline poor, Apricot miserable, Weardale Perfection full of stripe, Baroness Heath rotten; while, *vice versa*, Diana was never half so good, and the ancient but most attractive and distinct variety Sir William Harcourt very vigorous and free from its usual streak. Both Eyebright and Gloria Mundi were much above their usual form. In certain gardens the usual sequence of flowering

Hume \times t. calathinus. Another item which may be a useful hint for some is the great success of the "Buco" Hand Cultivator. I find for my purpose of loosening the soil between the rows of Daffodils that the small, short-handled size is the most useful. I take the short one out and put in its place an ordinary long one. The larger five-pronged implement is also used when the rows are not very close together. I first saw these at Colonel Cotton's bulb farm at Llantair, Anglesey, twelve months ago, and they more than confirm all the flattering things he said about their working. A last word must be one about the lasting power of Pearson's Alert. It opened here this year on March 6, and it was still a flower in the distance on April 10. Can anyone go one better with a true tale of lasting?

JOSEPH JACOB.

GARDENING FOR BEGINNERS.

THE ART OF BUDDING ROSES.

BUDS are formed in the axils of leaves, in the angle between the leaf and the shoot or branch. Buds contain, in embryo, either flowers or shoots, sometimes both. The round-shaped buds generally contain flowers, and the conical-shaped or very pointed buds mostly contain a shoot only. A bud is only a tiny object, yet it will grow and form a large branch, or even a whole tree. When taken from one Rose tree and budded on another, or on the common hedge Briar or any suitable stock, it still retains its distinctness as regards variety. Budding may be done in July, also in August, but this year Roses are at least a fortnight in advance of normal seasons, and in consequence the work may be carried out within the next week or so. The proper time is when the bark separates freely from the hard wood. Never make use of a poor stock which is not growing freely, whether it be a standard, half-standard or dwarf stock. The latter must be strong, as it has such a great influence on the growing bud. If possible, select a dull day for the work of budding, and if fine rain falls so much the better. A Rose bud is a frail thing in itself; it is, after being severed from the parent bush, dependent upon the sap in the tiny portion of bark for nourishment, at least to a great extent.

Selecting the Buds.—The best are those buds growing near the middle part of a branch. If branches are cut off, they should be at once placed in a vessel of water, and the amateur will act wisely if he retains them in water and uses the buds direct from them as the latter are inserted. A shows the buds in the axils of the leaves, and the curved line denotes the way in which the buds are to be severed from the branch. It is very important that the cut be made well under the base of the bud, as shown at B, and not too close to it, as shown at C. There will be a small portion of hard wood attached to the shield or bark containing the bud, and this hard wood, O, must be carefully



SHOWING HOW BUDS ARE TAKEN OFF AND PREPARED BEFORE INSERTION.

removed, as shown at E, leaving the base of the bud, F, quite exposed but not bruised. Directly the hard wood is taken out, the bark will curve a little, as shown in the illustration at R, and it must be moistened with water immediately. G shows where the buds are to be inserted in the branches of a Briar to form a standard or half-standard Rose tree. The slits must be bark deep only, and made quite low down, as near as possible to the main stem of the Briar.

How to Insert the Bud.—H shows the T-shaped cut made in the bark; I shows the bark raised from the hard wood, and this must be done with the aid of an ivory-handled budding-knife or a smooth wedge-shaped piece of Oak. At J the bud is shown inserted. When actually putting in the

bud, cut off the top portion of bark square across so that it will fit in quite firmly. Comparatively short incisions and short buds should be the rule, as small wounds heal more quickly than large ones, and if the bark is moist when inserted it will adhere to the new branch very closely and so exclude air. Retain the leaf, or a portion of it, as it will sustain the bud for a time. New bast matting should be tied round the newly-inserted bud, as shown at K. A piece a quarter of an inch wide and 12 inches long will be sufficient for each bud. Moisten the buds night and morning with a fine spray. G. G.

PLANTING GREENS IN CLAYEY SOILS.

A HEAVY, clayey loam, when well worked and prepared, is a fine rooting medium for Greens used both for the autumn and the winter supplies I would, however, give a word of warning to those inexperienced in the growing of crops in such soils. Greens planted in unmanured, badly-worked, clayey soils rarely prove satisfactory in rather dry summers. The plants recover somewhat when the autumn rains come, but in the meantime the leaves turn very blue and become hard, and then the hearts do not grow as large nor as tender as they should. Thoroughly break up the sub-soil and mix some rotted manure with that portion lying about four inches below the surface. The top soil then remains more open and is warmer. A clayey soil is not at all difficult to work after a heavy shower of rain has fallen on it when it has been for a short time lying dry and hard. When the plants are put in, however, the ground must be rather dry; then, if they are watered immediately, they will grow very freely. Use the hoe often between the rows of plants, and so keep the surface open, prevent cracking, and kill weeds while in a small state. So treated, the crops will be heavy. B.



BRIAR STOCKS BEFORE AND AFTER BUDDING HAS TAKEN PLACE.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Kitchen Garden.

Winter Greens.—Continue to plant these in variety for producing a plentiful supply during the winter months. Where space does not permit of a piece of ground being set apart purposely for them, they may be planted between other crops that will not occupy the ground too long, such as winter Onions and Runner Beans. Select showery weather for planting, even though the ground is firm, this will be found to be so much the better, and the plants will make sturdier growth and be better able to stand the cold. When the first crop is cleared, just fork over the ground between the rows of winter greens.

Peas.—It is not generally advisable to sow after this date, though in a congenial season a small sowing of a suitable variety will provide some good dishes. Essex Wonder is a good variety and prolific cropper. Continue to stake earlier sowings as they require attention. Stake firmly and neatly, and clip off the tops to the desired height according to the variety.

Turnips.—Make another sowing or two, according to the requirements, in drills 1 foot apart, and if the weather is dry cover with short lawn mowings, as I think I have previously advised. These are an excellent preventive against the Turnip flea. Keep the surface soil well hoed between growing crops, and dust with soot in showery weather.

Globe Artichokes.—These will benefit, if the weather is hot and dry, by a good soaking of water and the addition of liquid manure-water.

Plants Under Glass.

Panicum variegatum.—A fresh batch may soon be obtained by inserting cuttings, say, five or six, round the edge of a 3-inch pot and well watering in. For a week or two these may be stood in the shade in a warm house. The same applies to Tradescantias, Fittonias, Pileas, Selaginellas and other like subjects.

Cyclamen.—The young plants will by now be ready for their final shift into the pots in which they are to flower, and 5-inch pots will be large enough to produce good plants. A compost of good fibrous loam, with a fair proportion of flaky leaf-mould, a little sharp road grit and bone meal, will answer well. Pot fairly firm; leave the corm showing well above the level of the soil when finished. Water well after potting, but avoid over-watering afterwards until roots are active. Stand the plants on a good, firm ash bottom well sprinkled with soot. Keep the surroundings moist, give plenty of air, and shade from bright sunshine, but not too heavily.

Herbaceous Calceolarias.—For greenhouse and conservatory decoration these are beautiful subjects in the spring and early summer months, and when a good strain is selected, the colouring of the flowers is most varied and beautifully marked. Sow the seed thinly as level as possible, on the surface of a pan filled with a fine compost, and just cover with some sandy soil. Well moisten, as previously recommended, by immersing nearly to the rim in water. Stand in a shady place, cover with a sheet of glass, and further shade when sunny with paper. The seedlings when large enough will need carefully pricking off, and must be placed where they will be free from attacks of slugs. Keep the surroundings throughout their season of growth moist and cool.

Streptocarpus.—The seedlings that were sown early in the year and pricked off into boxes will now be large enough for potting singly into 3-inch pots, and possibly a few of the more vigorous into a size larger. The plants will then soon commence to flower, but, unless particularly wanted for decorative purposes, they will make better growth if the flower-spikes are removed.

Fruits Under Glass.

Strawberries for forcing next season for the earliest batches need to be thoroughly matured early, so that when enough runners are to be obtained sufficiently large, layering may be proceeded with. Three-inch pots are best for the purpose, though some growers favour layering direct into the fruiting pots. When the former method is adopted, use clean pots, so that they

knock out readily. One crock is sufficient, and a compost chiefly of loam will answer well. Stand the pots, as many as needed, round the parent plant, then slightly bury the runners and peg down. Various methods are adopted, including wire pins, some growers fastening with a stone; but one of the best I know, where a quantity has to be done, is to take a bunch of thin Willow or Spiraea sticks cut last winter and put them in a tank of water for twenty-four hours; cut up into lengths of about three inches and bend double as wanted. Avoid over-watering, but damp over twice daily when the weather is warm and dry.

Melons.—When the earliest fruits have been cut, and it is the intention to plant the house again, have the whole of the contents removed and give the walls a thorough whitewashing, well cleansing the glass and woodwork before building up another bed.

The Hardy Fruit Garden.

The Rain.—Since writing the last calendar we have had some welcome showers, which have had a good effect on all hardy fruits, both in cleansing the growths and supplying water at the roots. At intervals the application of a quick-acting artificial fertiliser on swelling crops will be advantageous.

Figs.—Look over the trees and remove weakly shoots where the growth is crowded, and secure the newly-made shoots either by nailing or tying with broad strands of raffia. Avoid having these tied too tightly.

The Flower Garden.

Verbenas.—As the growths lengthen, peg them down, and remove the flower-buds for a time to encourage growth. Keep the surface soil stirred between the plants.

Michaelmas Daisies.—These are now growing apace, and the growths will need securing to the stakes with raffia. The longest of the growths that are running away may be stopped, but otherwise these will be better for not doing so, as the plants will be fully branched at flowering-time where five or six growths are allowed to remain. Keep the Dutch hoe moving frequently between them to encourage growth and eradicate weeds, and during showery weather a dusting of soot or fertiliser will be beneficial. If any signs of mildew appear, syringe the plants with an insecticide, such as Quassia or some other specific. The Amellus section, though dwarf, are better for having the main growths loosely supported to a single stake.

Mignonette.—Thin as becomes necessary and make another sowing. Among the Roses this is generally much appreciated.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Shrubs.

Rhododendrons.—It is usual to relieve the finer varieties of plants of seed-vessels, which is undoubtedly a great help towards enabling them to produce and mature shoots to flower another year. Attention should at the same time be given to the stems, lest suckers from the stocks should be draining the plants of their sustenance. Some prune at this time, but pruning must be done with much judgment and only on healthy, vigorous plants.

Dead Wood.—I never remember so many branches, and in the case of Hollies so many plants, to have died since spring, which may be only the effect of last year's drought, but probably also of the very hard frost in January. Besides being unsightly, dead wood is very harmful to the living shrub, and it is therefore very important that an effort should be made to remove it at the earliest moment.

Flowering Shrubs.—Seldom, if ever, have these been more floriferous than this year, and some that have failed to flower hitherto have this year done so. Of such may be mentioned Xanthoceras sorbitolia, Pyrus Manlei, if at all crowded with shoots, should be relieved of a portion. Choisya ternata also may be lightly thinned and pruned into shape, should the bushes be growing one-sided, which they have a tendency to do. Overgrown Scotch Roses may now be cut to the ground, consequent on which they will, like Willows, make

long shoots for next year's flowering. Hedges of Sweet Briar grow very rapidly at this time, and must not be allowed to go untrimmed.

The Hardy Fruit Garden.

Breast-Wood.—Continue to relieve all kinds of trees of superfluous growths. Red Currants may have their shoots shortened, and should aphid attack Gooseberries, the parts affected may be cut off and burned at once.

Figs.—These will now need attention, and new growths should be selected to lay in for cropping another year. The shoots must not be permitted to extend outwards, but laid in close to the wall in order to obtain all the heat possible.

Grafts.—The ties on these should be removed, and if it is considered necessary, others substituted for them, so that the bark may not be cut. The number of shoots, where too many have pushed, must also be reduced to a proper number. This will give those left all the sustenance available and make them much stronger in consequence.

Apples.—About this time American blight shows itself, and means must be taken, if not to exterminate it, at least to keep it under. Syringing very forcibly with hot water, or that strengthened by soft soap and petroleum or a little salt, is a simple but fairly efficient disinfectant for summer use. Irish Peach, which sets in clusters, may now be thinned somewhat freely if large fruit is expected or desired.

The Vegetable Garden.

Cauliflowers.—Seeds of a second-early variety sown now will provide nice medium-sized heads for using in late autumn.

Large Onions.—Repeated surface-dressings of stimulating manures are almost essential to the production of these. A fortnight may be allowed to intervene between them. A rather deep surface-hoeing subsequent to application is of great benefit. Winter Onions should be harvested as soon as ready.

Brussels Sprouts.—The earliest and largest of these should have a bank of soil applied to each side of the drill. The drills being 3 feet wide, a spade, should the ground be hard, is the best implement for the operation. This, moreover, loosens the soil to a far greater extent than is possible with an ordinary draw-hoe. Usually stimulating manures are hurtful to this crop, that is, if small, hard sprouts are the objective of the cultivator.

The Flower Garden.

Violas.—Particularly on light soils these have a tendency to go to seed, and then to become quickly "seedy." The cure for this is to pick off all the flowers and seed-vessels, following which the unopened buds will make the beds as gay as ever in a few days and the plants be enabled to retain their freshness.

Seed-Sowing.—It is the usual practice to sow Hollyhocks about this time, in order to secure strong flowering plants for another year. There is still time to sow Humea elegans, also Celsia coromandelina, C. pontica, Delphiniums and many more hardy plants.

Dahlias.—To have these, especially plants from old roots, dwarf, keep pegging down the shoots, at the same time cutting away weakly parts. The earlier plants will be now well forward to bloom. Those from cuttings, as a rule, are best staked, and these will now need attention at very short intervals. See that the thickening stems are not being cut by the ligatures made earlier in the season.

The Plant-Houses.

Seed-Sowing.—Canterbury Bells and Campanula pyramidalis intended to be flowered in pots next summer should be sown without further delay. A few potlins of Mignonette may also be sown for autumn. These are best grown on single stems and several in a pot, using a very open, rich soil. It is always advantageous to cover the surface with some material that at once darkens the seeds and keeps the soil from drying.

Climbers.—There will be much labour in tying climbers and arranging the shoots so that they do not encroach on each other, a condition that is not only bad for the plants, but renders the keeping of them clean very difficult, insects invariably being attracted thereto. The strong young growths of Lapagerias sometimes are eaten by slugs, an occasional dusting with soot being effective in keeping these off.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE NARCISSUS FLY.

DURING the last few years the two-winged fly, called by scientists *Merodon equestris* (the latter name having nothing in common with horses), appears to be increasing in numbers in this country. It is called the Narcissus fly, but lately has been attacking other than Narcissi, and I myself know that it has attacked *Scilla* bulbs. It has already caused much damage by destroying bulbs of Narcissi, and latterly *Lilium*s, and my idea now is that it may attack other members of this family.

The life of this insect is as follows: During the end of May and June, according to season and climatic conditions, this two-winged fly is on the wing, and may be seen in bright sunshine basking on the leaves of Narcissi and other plants. The female lays the eggs between the leaves at the surface of the ground, and the young grub, which is almost identical in appearance to the house-fly or blow-fly maggot (to which it is closely related) travels down and burrows its way into the bulb, where it is feeding during the time the Narcissus is forming its bulb growth for the season. It remains in the bulb in the hollow which it has eaten out, and during early spring it transforms into a chrysalis or puparium. The puparium is usually the colour of the soil, and is shaped almost like a horse-bean, but with grooves and ridges on the incurred side, leaving the Narcissus bulb (which it has usually killed) and hatching out at the end of May and early June. The fly belongs to the diptera or two-winged flies, to which, as I have said, the house-fly and bluebottle, or blow-fly, belong.

This is a well-known insect on the Continent, and may be as well known here if precautions are not taken to keep it in check. In size it is about half an inch long, with very large eyes and very strong legs, and may be easily distinguished from the bee by having only two wings, which are folded along the body, hiding it, and by its not having longish black antennæ or horns, which all bees have. The large eyes are black, separated with a short, stiff line of dark gold hairs; the wings are transparent and attached to the large body; the abdomen is densely covered with short, stiff hairs, dark gold, and the insect looks, at the first glance, like one of the small black and tawny bees, but may at one glance be distinguished from them by its having only very short and hardly noticeable antennæ or feelers. The antennæ are the most easily noticeable difference, but it has also only two wings, while bees have four. It sings with rather a high note when disturbed.

J. HENRY WATSON.

THE EDITOR'S TABLE.

Pæonies from Langport.—The arrival of a box of handsome Pæonies sent by Messrs. Kelway and Son of Langport serves to remind us of the usefulness of these hardy flowers at this season. Pæonies are foremost among plants for the flower garden. No herbaceous border is complete without them, and they are equally at home by the side of grass walks or in a woodland garden. Moreover, Pæonies lend themselves in a most pleasing way for distant effects, while as cut flowers they are extremely useful for house decoration. The hardness of the Pæony is proverbial. Indeed, it is claimed to be as hardy as the Dock by the wayside, thriving in any soil without need of protection in the severest weather. Among the

flowers sent we were particularly impressed with those of the new section known as the Imperial. These flowers are noteworthy for their delicate tones and beautiful art shades. Unlike both single and double varieties, those of the Imperial section have outer shell-like guard petals surrounding a rosette of petaloids and golden filaments. The variety A. M. Kelway of this section is most charming, and the same may be said of Queen Alexandra, a lovely flower of absolute purity of colouring, resembling an open Water Lily, with outer petals spotless white, and golden clusters of anthers within. The truly double flowers are as popular as ever, and the variety Emperor of Russia, a magnificent deep purple-crimson, should find a place in every garden where these flowers are prized. Exquisite, another double variety with handsome pink flowers, and Mr. Manning, a very deep crimson, are among the best of the doubles now before us. The single varieties are always welcome, and Purple Emperor, a deep rosy purple of wonderful size, is one of the most beautiful we have ever seen. We remind our readers that now is the time to make a selection and plan their borders for autumn planting.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plans for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SWEET PEAS NOT DOING WELL (E. T.).—You should immediately pull out and burn the unsatisfactory plants. We have no sympathy whatever with the preparation of the soil in trench form, and should be inclined to think the roots have reached rank manure. If the soil used was new, it would cause the trouble. We cannot conceive that the soil is sour in such a season unless it was excessively manured and imperfectly cultivated. Lime will be advantageous as far as the soil is concerned, and it will not injure the plants.

DIVIDING IRISES (A. G.).—Irises should be divided and replanted in spring, preferably March or early April. Avoid planting them in big clumps, since better results follow upon free division and replanting in well-prepared soil. *Iris stylosa* prefers a hot, sunny position at the foot of a warm wall, and much old mortar or lime rubble mixed with the soil. *Iris sibirica* is a moisture-loving species, and should be catered for accordingly. Herbaceous Pæonies should be divided and replanted in August or September. The subjects should never be transplanted in big clumps intact. The Tree Pæonies should be planted during September or October, preferably while the soil is warm.

SWEET PEAS FOR EXHIBITION (Alpha).—Your collection is comprehensive, but several varieties of conspicuous merit are omitted. You do not say how many varieties you desire to give special attention to with a view to exhibition, so thirty are herein specified, which would enable you to exhibit in a class for twenty-four distinct. In your district (Caithness) we should expect the plants to reach their best about the middle of August, but much depends on the weather. The chosen varieties are: John Ingman, Paradise Ivory, Mrs. Henry Bell, Etta Dyke, Elfrida Pearson, Mrs. C. W. Breamore, Earl Spencer, Mrs. Roubtahn, Asta Ohn, Countess Spencer, Mrs. Cuthbertson, Dobbie's Cream, Loyalty, Mrs. Heslington, Nubian, Hercules, Money-maker, Clara Curtis, Eric Harvey, Mrs. W. J. Unwin, Barbara, Doris Usher, Charles Foster, Edrom

Beauty, Thomas Stevenson, Maid Holmes, Scarlet Emperor, Edna Unwin Improved and Flora Norton Spencer.

JAPANESE IRISES (P. W.).—Prick out the seedlings by all means, in a richly-prepared bed of soil, selecting a position of some shade and where moisture is assured or readily supplied. The soil these things prefer should be of loam, leaf-mould and manure with a little sand, the whole to be passed through a sieve of half-inch mesh and well mixed. Do not attempt a raised bed; these plants love moisture. If given fair or liberal treatment, the plants should have progressed sufficiently to be given their permanent quarters in April, 1913. Usually three or four years are necessary before the flowering stage is reached, and even then it may not be characteristic or good. How good will depend not a little upon the liberality of their care, and not a little also upon the strain from which the seedlings have come.

ORIENTAL POPPIES FAILING (N. H.).—It is curious that the plants appeared all right through the winter and have since made but little progress, and we fear there is an influence at work, apart from the fact that your garden is a town one, that we know not of. These plants do much the best in the open border, and, once established, will go on for years without trouble or care. In the young state the growth is meagre, and we are wondering whether as non-flowering plants they have not practically completed their growth for the season. In all the circumstances, we can only advise you, a little later on, to carefully remove the soil about the plants to see if they are alive and well at the root, and, if so, to possess your soul in patience. If you have more than one plant, there would be no great risk in lifting one for examination at any time, and you might let us see it. Without some such evidence we can only speculate as to the cause of failure, and the behaviour of your plants points to something more than the period of shade to which you refer.

PROPAGATING PHLOX SUBULATA AND SUN ROSES (H. P.).—There should be little or no difficulty in propagating these plants if the right material at the proper season is obtained. After flowering is well over, slightly shorten back the growths of the plants with scissors or knife, and give attention to watering, so that a new growth quickly results. In a few weeks' time, when the new shoots are about two inches in length, they may be stripped (not cut) away from the parental stem in such a manner that the "heel," or junction with the stem and cutting, is fully reserved to the latter. In this way, without further ado, the pieces may be inserted in a cold frame in very sandy soil. Cuttings such as these may be inserted from July to September, or even later. Much the same principle should be applied to the other groups named, though these root freely and well when the cuttings are made to a joint in the ordinary way. The thing to aim at is a cutting of youthfulness and vitality, old flowering shoots being usually of but little value. August and September are the best months for the latter group, and cold-frame treatment will be found much the best.

THE GREENHOUSE.

CULTURE OF GERBERA HYBRIDS (Anxious).—As far as we can learn by your letter, there is nothing whatever wrong in the culture of your Gerberas, unless, perhaps, it be the inclusion of burnt refuse in the potting compost. Still, although we have not seen it used for the purpose, we do not consider it would do any harm. You say nothing as to the time when the seed was sown nor the size of the plants. One point to bear in mind with regard to the successful culture of Gerberas is that, although the seed germinates very quickly, the young plants grow slowly afterwards. During their earlier stages the root progress is by no means rapid. The temperature named by you is very suitable for these pretty flowering plants, and if they are given a reasonable amount of water, we think they will soon grow away freely and ultimately flower. They are certainly plants that will take their own time, and they cannot be hurried with additional heat. Should our surmise as to growth soon taking place not be justified by results, we should like to hear further from you, giving us fuller particulars.

FRUIT GARDEN.

PEAR LEAVES ATTACKED (J. C. W.).—The Pear leaves are attacked by the Pear leaf-bliester mite (*Eriophyes pyri*). This mite is probably carried from tree to tree on the feet of insects. Spraying with Oregon wash is probably the best remedy, and it should be applied in winter. Nicotine spraying might probably with advantage be tried now. If only one tree is affected, and that in a pot, it would probably stop the spread of the plague to destroy that tree. It would be better to use lead arsenate paste instead of Paris green against the caterpillars, as there is less danger of injuring the foliage with that.

STRAWBERRIES NOT FRUITING (J. R.).—From what you state in your letter, there does not appear to have been a single item of culture likely to secure the best results omitted in your case, and therefore it is difficult to suggest what the cause of failure has been. The complaint is general this season of inexplicable failures with Strawberry crops, in pots under glass as well as out of doors. We can only come to the conclusion that the great heat and drought of last year are at the bottom of the trouble. In many parts we know that the growth of the plants was seriously crippled. In fact, on warm, light soil in many parts (where watering could not be resorted to) the plants were killed outright. We all know that, in the absence of a strong and healthy growth of the plant during the previous year (after fruiting), the chances of good crops the following year are greatly lessened,

because it is quite impossible to have a healthy and full development of the flower-buds, or crowns, in the absence of this free and healthy growth the previous summer.

KITCHEN GARDEN.

MILLEPEDES AND ONIONS (G. W.).—The animals sent, attacking the Onions, &c., are millipedes (*Julus complanatus*). Unless the use of the water from the cess-pool has caused the soil to become sour, a condition which can be corrected by the use of lime, we do not think it has had much to do with the millipedes. We should recommend you to try Vaporite or Apterite, or some such soil fumigant, which will probably drive away the pests, and in the autumn give a dressing of lime to the soil.

ABOUT PEAS (Gowland).—The little lumps on the roots of the Peas are not a symptom of disease, but the outward and visible sign of the inward presence of numerous bacteria which take nitrogen from the air and pass it on to the plant so that it may be used by it. They are of great advantage to the plant. The Peas have been killed by the fungus *Thielavia basicola*. The fungus seems to thrive best where the drainage is not thoroughly efficient and where the plants have been exposed to some weakening influence. Thorough drainage, thorough cultivation and a sufficient supply of potash and phosphates are essential to success.

CAULIFLOWERS AND CATERPILLARS (X. Y. Z.). Yes; the caterpillars found in the Cauliflowers are usually those of the white butterfly. The means of checking them are the capture of the butterfly, destruction of the eggs, which are laid on the under side of the leaves, hand-picking the caterpillars, and spraying with salt water (say, a handful of salt in two gallons of water). Mosquito netting spread over the patch will be of material assistance. The destruction of the chrysalides, which may be found in crevices in walls and against fences in the winter, is an important measure. The growing of Cabbages and Cauliflowers in clean situations, away from fences and hedges, is also important.

PREPARING MANURE FOR MUSHROOM-BED (W. T. H.).—The manure would cool as much in an hour if spread out thinly on the ground as it would in a longer time. Probably your manure is too dry, and does not decay in the process of fermentation as it would do if it contained more moisture. The hot weather at the present time helps to keep the temperature high. In any case, seeing that the manure has been in preparation so long, we would now make it up into a bed. If it is dry, let it be turned over first and slightly moistened with water, and then made into a bed as directed, in the driest and coolest position you have in the garden. Spawn immediately the thermometer drops to 80° Fahr. on the surface of the bed. If you can make a rough framework of stakes over the bed and cover this with any odd mats or other available material, in order to keep it cool and dark, it will help the bed much during the summer, as Mushrooms do not like too much heat at any time.

MISCELLANEOUS.

THE YELLOW-FLOWERED CHERRY (Mrs. A. H.).—October is a good time for planting the yellow-flowered Chinese Cherry (*Prunus serrulata flore luteo pleno*). It may be obtained from Messrs. Veitch, Combe Wood Nursery, Kingston Hill, Surrey. The specimen sent for examination is *Ceanothus veitchianus*.

RED GROWTHS ON LIME LEAVES (D. M. M.).—The peculiar reddish growths on the Lime leaf are due to the presence of mites, which cause irritation to the plant and induce the formation of galls having the curious "nail-like" appearance and the red coloration which these show. The mite is fairly common; it may be seen, if the gall is cut open and magnified, living among the hairs in the interior of the gall.

VARIOUS QUESTIONS (E. M. S.).—(1) Grow five in a 5-inch pot. If you want the plants to flower early, do not stop them. If you want to make them more bushy and to flower later, stop them, or pinch them back, as you term it. This should be done as soon as the plants restart freely into growth after being potted. (2) Yes; certainly. Now is a good time to apply it. (3) Royal Albert is still one of the best for early forcing. Victoria is still excellent. Daw's Champion is a comparatively new variety, of great excellence in every respect.

BOX OF LARVÆ (N. B.).—The grubs are those of the clay-coloured weevil, which is now turning into the chrysalis state. They are very destructive to the roots of many kinds of garden plants, and extremely difficult to deal with on a large scale. It would be well to try to capture as many of the beetles as possible. They are, as the name suggests, the colour of the soil, and leave the latter during the evening to feed on the leaves of plants, on bark of trees and the young shoots of Raspberries, Vines and so on. They may then be made to fall on a sheet spread beneath the plants they attack, and may so be captured. The same result follows if a light is suddenly thrown upon them. They are about three-eighths of an inch in length, and have very hard skins. Next to hand-picking, the best method of dealing with them while they are in the soil is to inject carbon bisulphide, at the rate of about one ounce to the square yard, into the ground they are haunting. This is a very poisonous and inflammable compound, and must be used with great care. The fumes will spread through the soil and kill all animal-life; but unless the liquid comes into actual contact with the roots of the plant, the plant itself will not be injured in any way. Where the ground can be turned up, the insectivorous birds, such as starlings, robins and so on, will do much to check the pest.

LEGAL POINTS.

Fruit, Birds and Curtilage (F. V. H.).—A correspondent whose fruit is suffering from the depredation of birds asks whether shooting is allowable if they are within the curtilage. The Wild Birds' Protection Acts, 1880 to 1890, prohibit killing between March 1 and August 1 certain scheduled birds, such scheduled birds being chiefly those which are rare and becoming extinct. I do not think he has much to fear from this series of Acts, and I think his question is rather directed to shooting without taking out the ros. gun licence. By 33 and 34 Vict. c. 57, a penalty of £10 is imposed on every person who shall "use or carry a gun elsewhere than in a dwelling-house or the curtilage thereof" without having in force a gun licence. The expression "curtilage" includes the yard, offices, and enclosed garden surrounding the house, but it does not include an orchard separated from the house by an enclosed yard. Apart from the curtilage question, a gun can be used for the mere purpose of "scaring," but not for the purpose of killing birds.

Land, Further Purchase and Deeds (Rusticus).—A person who has bought and taken a conveyance of a piece of land is thinking of buying some more from the same owner, and wishes to know whether further conveyancing is necessary, or whether the former conveyance could be altered. The latter alternative must not be adopted. It may be an ingenious idea to save expense, but it would be a material alteration inconsistent with the original purpose of the deed which would make the previous deed void, even if it did not expose the parties to a prosecution for forgery or an offence against the Stamp Acts. Our querist, if wise, should go through the somewhat dreary performance he did on the former occasion, namely, after signing the contract and delivery of abstract, take the papers to his solicitor, who will investigate the title and prepare the conveyance, &c. Although the owner may be the same, the title to the new acquisition may be entirely different.—BARRISTER.

BOOKS.

Wild Flowers of the Hedgerow.*—The little volume before us is the first of a series of "Wild Flowers in Their Homes," and, so far as it goes, is well done. We make the remark advisedly, inasmuch as we should have liked to have seen the generic and specific names bracketed with the common or popular names of the plants as these appear either in the illustrations or in the text. The names are so given in the index, and to the student of wild flowers, as well as to the general reader, it would have been a greater convenience had they appeared as suggested. We hope we are not expecting too much in a book the cost of which is but 1s., though information of the kind we have in mind adds greatly to the general utility of such a book. The contents is comprised in three main chapters, "Wild Flowers of Spring" (March—May), "Wild Flowers of Summer" (June—July) and "Wild Flowers of Autumn" (August—September). Between seventy and eighty species and genera are dealt with, and much useful and reliable information is imparted. There are also about a score of illustrations of wild flowers in

* "Wild Flowers of the Hedgerow," illustrated, by W. Percival Westrell, D.Sc., F.L.S. London: T. Werner Laurie, Clifford's Inn.

black-and-white, and some half-dozen coloured plates, which are beautifully and naturally done.

Making a Fruit Orchard in British Columbia. The author of this excellent book, who states that he is most concerned with the Apple, strongly advises against the purchase of land in that colony without it being first seen, especially as it varies greatly in quality in even limited areas. Situation, drainage and aeration also are matters of importance. Thus, a deep, flat position with bad aeration suffers from frosts; on the other hand, the side of a moderate slope is good, especially if there is a suitable soil. A north-west aspect is preferred, but where winds sweep coldly it is wise to plant breaks in the form of Norway Spruce or Lombardy Poplar to counteract the wind force. If a stream or lake is contiguous, the effect on the atmosphere is good. But in selecting sites for orchards some consideration has to be given to communications by river or rail with a town, otherwise getting produce to market or obtaining supplies may be very costly. So much sums up the pith of the introductory chapter of the book, as it includes valuable information to the intending fruit-rancher in a concise form. It is obvious that the author writes in an absolutely impartial way, and seeks to show emigrants what are the pitfalls to avoid, as further on he gives wide information as to all that has to be done once the ranch is started. In the chapter devoted to "Soils, Rocks, Water and Timber," more complete evidence of the need for personal inspection of sites is furnished. The author deals fully with land prices and the amount of capital required to start ranching. Lack of such knowledge has in the past brought many a good man to grief. Then the cost of labour in clearing land, especially of tree stumps, is shown, and reading his information as to blasting operations, the use of chain and pulley tackle, and stump-burning, we cannot envy the settler on such land or regard his lot as a happy one. The first few years of such a life must be very hard work and almost slavery. What are described as surface crops to utilise the land while the trees are growing, Potatoes and Onions especially seem to be the most profitable. Bush or soft fruits may be grown in moderate quantities, unless very convenient markets are at disposal. Poultry pays well if kept secure from predatory enemies. The best varieties of Apples to grow are mentioned, and the selection shows that supplying the British market is fully considered. Short selections of Pears, Plums, Peaches and Cherries are also given; but these play very minor parts to the Apple. Proper methods of planting trees, with descriptions of cultivation and management, follow home methods very closely. The same may be said with regard to pruning, a subject very difficult to instruct the novice in, unless he can attend ocular demonstrations. Proper spraying of orchards with fungicides and insecticides is emphasised, showing that, brilliant as the climate of British Columbia may be, it creates many troubles for the fruit-grower. We strongly commend this book to all intending emigrants to British Columbia whom its contents may specially concern. It should be a pocket companion to them on the voyage out. It is the sort of book to set all such thinking, as well as to furnish them with preliminary knowledge which it would be folly to ignore. The book is written purely in the interests of the intending settler, and as such it merits all praise and all confidence.



THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Sir Alexander Cross, Bart.—On the next page appears a portrait of Sir Alexander Cross, on whom has been conferred the honour of a baronetcy, as announced in our issue last week. Sir Alexander is the senior partner in Messrs. Alexander Cross and Sons of Glasgow.

Rose Mme. Isaac Pereire as a Pillar.—When visiting the beautiful Rose garden at Chalkwell Park, Westcliff-on-Sea, last week, we were pleased to find this delightful old Rose grown in pillar form. The pillars were laden with the large, old rose coloured blooms, and were free of the green centres that sometimes mar the beauty of this variety. For the sake of its fragrance alone this old Rose is worthy of a place in any garden. In the autumn, when the sun is not so powerful, the colour of the blooms is almost cherry red.

Crassula coccinea.—This plant was introduced as long ago as 1710, and though numerous species have been brought to this country since then, and various hybrids between this and others have been raised, yet a good form of the true coccinea stands out superior to all of them. The fact that it has at least for the last half century been a favourite subject with the market-grower, and still holds that position, is proof positive that it is a really good thing. It is a plant of simple requirements, and one that, owing to its succulent nature, must not be over-watered during the winter months, at which time all that it needs is a temperature suitable for a Pelargonium. The nomenclature of this good old plant is somewhat confusing, for while it is usually known as above, yet it is sometimes met with as Kalosanthos coccinea, and in the "Kew Hand List" it is given as Rochea coccinea.

The Australian Bluebell Creeper (Sollya heterophylla).—The popular name of this slender-growing ligneous climber is a very appropriate one, as the bell-shaped flowers are of a delightful shade of blue. While it may be treated as a wall plant in the favoured parts of these isles, the protection of a greenhouse is, in most parts, necessary to its well-doing. In that structure it may be grown in different ways, as, if the house is not a lofty one, it has an exceedingly pretty effect when trained to the roof or rafter, the drooping blossoms being then seen to the best advantage. Besides this it may be grown in pots, and the slender shoots twined around a few sticks. In this way it will flower profusely, and that, too, over a lengthened period, while flowers of that tint are appreciated by everyone. This Sollya may be readily struck from cuttings of the young growing shoots, put into sandy soil and placed in a close propagating-case kept at a warm greenhouse temperature. It prefers a certain amount of peat in the potting soil. The late Mr. J. H. Veitch, in his

"Traveller's Notes," mentions that while he met with this Sollya freely in Western Australia, it was always as a dwarf bush and not as a climber.

The Namaqualand Daisy.—This beautiful little low-growing annual is doing better this year than we ever remember seeing it before. Plants that were raised from seeds sown in a cold frame at the end of March commenced to flower as soon as planted out the third week in May, and look like continuing the display right through the summer. The beautiful glossy, orange-coloured flowers resemble those of the Gerberas in shape and gracefulness. We have them planted between the Roses in a bed made up of such yellow varieties as Arthur R. Goodwin, Duchess of Wellington and J. Coey, and the effect is most pleasing. Owing to their shallow rooting they do not rob the Roses of much food, and are much better for Rose-beds than Violas. It is a pity that the common name of this annual is almost as unwieldy as the botanical one, viz., *Dimorphotheca aurantiaca*.

Spiræa decumbens as a Wall Plant.—*Spiræa decumbens* is a recognised favourite in the rock garden, where its pretty foliage and clusters of white flowers are always welcome in their season. It is considerably less known as a wall plant, but it may be grown with the greatest success on a wall with a considerable body of soil behind. At Monreith there is a capital plant under such conditions in the wall garden, and it was very pleasing indeed there. The difficulty with this and many other plants suitable for a wall is that of establishing it, and for the purpose young plants are best. If the wall is properly constructed, a stone may be taken out and the *Spiræa* put in with the ball of soil attached, and then a stone well jammed in about it, but so placed that any water which may fall on the wall will run towards the roots.

A Yellow-Flowered Tree Pæony.—From the firm of M.M. V. Lemoine and Son, Nancy, France, we have just received a coloured illustration of a fine double yellow-flowered Pæony raised at their establishment between the now fairly well-known *Pæonia lutea*, a native of China, and a variety of *Pæonia Moutan*. The new-comer, which bears the name of La Lorraine, has, according to the illustration, a large, full flower, which, when first opened, is of a soft sulphur yellow with a salmon tinge. It has gained high honours in France, and it is a pity it was not shown at the recent "International" here, for, according to M. Lemoine, it was grown for the show, but, unfortunately, three days of tropical heat caused the buds to expand suddenly a week too soon. This is certainly to be deplored, as good new plants were none too numerous at the "International," and so many highly meritorious subjects have emanated from Nancy that one may look forward with confidence to this Pæony making its *début* here.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Birds and the Fruit Crop.—Will you allow me to suggest to the bird-lovers among your readers that during the summer season they should make a point of periodically visiting their fruit-nets, and so ensure against such of our little songsters as may have been caught there dying a slow death by hunger and thirst? It is quite a common thing to find the dead body of a bird entangled in the meshes of a Strawberry-net, and one does not like to think of the lingering death by which the little thief has atoned for his very natural greediness.—Z.

The Naming of Roses.—Under this heading (see June 15, page 304, and June 22, page 314) your correspondents protest—and that by no means too strongly—against a practice adopted by some American florists of giving fresh names to already well-known Roses. Our cousins across the Atlantic may perhaps accuse us of being the first to originate this system of the changing of names. In the eighties, when there was such a demand for new Chrysanthemums, a good deal of this was done, not only in the case of varieties from the States, but also those from France. Some of the varieties sent out by M. Delaux were very harshly dealt with in this respect, among those which I can just recall to memory being Jeanne Delaux, which was renamed F. A. Davis, M. John Laing called M. J. J. Hillier, Tricolor changed to Mr. J. Starling, and Source Japonaise to R. Ballantine.—H. P. [The practice of re-naming varieties already in commerce and disseminating the same as new varieties is dishonourable and cannot be too strongly condemned. If trade growers, either in this country or abroad, are to enjoy the confidence of the gardening public, this evil must be stamped out at once. Unfortunately the practice is not confined to Roses and Chrysanthemums, other instances, notably among Sweet Peas and herbaceous plants, also among Alpines, Orchids and fruits, have recently been brought to notice. It is in the interest of trade growers and the gardening public that we give this matter prominence in our columns.—ED.]

The Cherokee Rose.—In the issue of THE GARDEN of the 15th inst. I see that the Cherokee Rose is mentioned as originating in the Himalaya. I have always been under the impression that this Rose was a native of the Southern States of the United States. I have an idea that this Rose was so named by the Cherokee Indians, who are a tribe of American Indians. I cannot be sure that I am right, but I believe that this tribe live in Florida, and joined forces with the Spaniards in fighting against General Jackson just before the annexation of Florida. At any rate, this Rose grows all over the houses in the South below Maryland, and especially well in Florida. It is not unlike the rugosa Rose, although the petals of the Cherokee Rose are thicker and more satinlike.—F. A. S. [Rosa laevigata, a species found originally in China, but probably also a native of the Himalaya, is usually called the "Cherokee Rose." This name has apparently arisen from the specific name given to it by Donn of Rosa cherokeensis. It is semi-evergreen and not very hardy. Many other names have been given to it, including those of Camellia, camelliæfolia, hystris, nivea, sinica, ternata and triphylla. The Rose from the Southern United States to which our correspondent

refers is probably the Prairie Rose (*Rosa setigera*). We may add that the "Kew Hand List of Trees and Shrubs" gives *R. laevigata* as the Cherokee Rose. A description of it under the name of *R. sinica* is to be found in the *Botanical Magazine*, t. 2847.—ED.]

The Dawson Rose.—When we had many fewer rambling Roses than we now possess, the Dawson Rose was much more popular than now, as it was then a comparative novelty, and its claims are apt to be overlooked now among the multiplicity of new wichuraianas and other ramblers. The Dawson is a neat pillar or wall Rose, soon covering a pillar well, and giving plenty of its semi-double flowers, which are borne in good clusters on nice dark green foliage. These flowers are of a brilliant rosy pink. I observe that it is credited to Messrs. Paul and Son, and as being sent out in 1898, in some lists, but I think it is really of United States origin. It has been in my garden for a number of years, coming to me as a tiny rooted cutting from the United States. It does well here on its own roots.—S. ARNOTT, *Dumfries*.

Ceanothuses Under Glass.—The note on page 302, issue June 15, is a very timely one on the subject of forced shrubs for indoor decoration. Many



SIR ALEXANDER CROSS, BART.

kinds have beautiful foliage as well as flowers, and with due care a continuous display of blossom may be had from January until they come into flower in the open borders. I consider the note referred to as timely, because cultivators must procure or prepare their plants well ahead of the time that they require them to be in bloom. During the present summer plants in pots or tubs that need it must be shifted to larger ones or be top-dressed, and, furthermore, as suggested, plunged in ashes or ordinary garden soil. The Ceanothuses are charming as pot plants, the variety *C. dentatus*, having a half-bushy habit, being especially suitable. *Ceanothus Gloire de Versailles* must not be omitted; its long panicles of blossoms are most beautiful.—B.

Rosa gigantea.—Seeing the notice of this Rose in your issue, I would mention as regards its hardiness that the plant of mine you referred to on July 23, 1892, and again on June 2, 1900, was,

when I left Reigate last June, still growing some twenty feet to thirty feet up the west side of my house. It has, however, never shown any sign of bloom. I always noticed that it never began to make its first long shoots till after other Roses, like Crimson Rambler, had already finished making their long shoots. Naturally, in hard winters it got much cut. If grown under glass it doubtless gradually acclimatizes itself, as so many plants do which change their time of flowering under glass. My plant shows its hardiness, as it has survived, unprotected, for some twenty years.—J. R. DROOP.

Exhibiting Daffodils.—Concerning the much-discussed "faking"—"improvement" I would call it—of blooms for the show-bench, I submit it is a practice that should not be condemned. It is absolutely "above board"—there is no secret in it; it is open to everyone to indulge in who cares to take the trouble. Without a question certain blooms can thus be "improved." Then why not do so? No one, I presume, will gainsay that it is the duty of a flower at a show to look its best, and that it is the exhibitor's business to see that it does do so. *Débutantes* would not dream of appearing at a *Levéé* except in Court dress, and generally "looking their best." It is expected of them. So with the flowers. But there is another aspect of the matter. To penalise artistic "faking" is to penalise the "small" man and give a further advantage to the "big" man in exhibiting. To select sufficient "show" blooms from a big stock is comparatively simple. But for the small man to produce the requisite number of flowers from his limited stock good enough to compete with his big neighbour is a very different, and always difficult, matter. So often—and I speak from personal experience—one has perhaps but three or four blooms of a variety. Two perhaps are good, the others moderate or worse. Unless by "faking" one can make the bloom of moderate form passable, one must give up showing what is perhaps a good and telling variety, and suffer in points accordingly. "Faking" thus becomes a necessity for the small man, unless he is to be unduly handicapped by lack of money, and no true Daffodil-lover will wish mere "shekels" to be the main-spring of his delightful hobby.—A SMALL EXHIBITOR.

—I have followed this correspondence arising from the Rev. J. Jacob's originating article with interest, for the subject is an important one. Mr. Watts (page 226) apparently desires that "artistic arrangement" should be the determining factor of success rather than excellence of flower. But who shall decide what is "artistic"? No two people see alike. The task both of judges and exhibitors would decidedly not be enviable under such conditions. The latter would never know what particular style of "artistic arrangement" appealed to the judges. They would have no fixed point to work to. At present they have excellence of bloom as their criterion. Mr. Watts, however, appears to dislike the "fixed point" idea—he dislikes anything stereotyped; he would encourage individualism in exhibits, yet his alternative to existing methods, all said and done, is, on his own admission, only that of "follow my leader." I believe the public do not care a brass farthing for "artistic arrangement" at Daffodil shows. They do not pay their money to see artistically-arranged foliage, but they do to see the blooms; and I maintain that the existing customary method of setting up not only shows the merits (or otherwise) of the individual flower to the greatest advantage, but it also greatly simplifies the task of judging.—A. C. C. R.

Enquiry.—Will some experienced fellow-gardener advise me how to flower *Ourisia coccinea*? It grows well in my rockery (North Riding, Yorks), planted at the water edge, some in partial shade, some in full sun, but it bears very few blooms.—**DICHROMA.**

Suggestion for a Small Rock Garden.—I enclose a photograph showing how I transformed a steep bank in front of my house into a small rock garden, which may be of sufficient interest to justify its reproduction in your paper.—**GEORGE LYON, Cairnryan, Howick.**

Rosa Moyesii.—Some three years since I purchased a plant of *Rosa Moyesii*, and for the first two years it occupied a position facing south and west, getting full sun after noon. There it produced only half-a-dozen blooms each season and made but little growth, and I feared it was a bad doer and sparse flowerer. Last autumn I transplanted it in a border with an east-south-east aspect. This spring the plant has been a sheet of flower, producing some one hundred and fifty of its beautiful crimson blossoms, evoking the admiration of all who have seen it. The plant is now sending up basal shoots some five feet high, and I am hoping that next spring it will do even better than this. I may add that I give it no protection in the winter, and there is no evergreen hardier than this. I think if this lovely Rose were better known, many more would be grown than is now the case. There is no Rose that I am acquainted with about the colour of the flowers of which there is so much difference of opinion, but, however it may be described, there is no gainsaying its special beauty.—**B.**

A Useful Lupine (*Lupinus polyphyllus* Moerheimi).—*Lupinus polyphyllus* and its varieties, so long esteemed as border plants of the first merit, have recently attracted increased attention by reason of the introduction of the pink-coloured forms, of which the most distinct is *Moerheimi*. Unlike its immediate forerunner, *polyphyllus roseus*, the first-named maintains its freshness and bright colour almost up to the moment the flowers fade. Never by any chance have I noted the flowers of *Moerheimi* exhibit the muddy purple colour that so greatly detracts from the value of *roseus* as a border plant. *Lupinus Moerheimi* forms a dense bushy plant of beautiful leafage; the main flower-stems are borne on the terminal points of the shoots, and are succeeded by laterals, which also flower and continue the display from May till July. It is the dwarfest of all the forms of *polyphyllus*, growing to a height of 3 feet. Its tapering, slender spikes of bright pink and white flowers proclaim it a plant of sterling merit and one of the most distinct of recent introductions.—**THOMAS SMITH.**

A Beautiful Speedwell (*Veronica filifolia*).—Admirers of rock plants would have observed the charming *Veronica filifolia* in some of the exhibits of alpinists at the great Chelsea Show, but it is only those who can see really good plants who know its full beauty. It is a plant familiar to the writer, who once obtained it from the garden of a great Continental amateur a good many years ago. His own plant was lost through a combination of unfortunate circumstances, but while it lasted it was a source of great pleasure with its dainty leaves and its still more dainty light blue flowers. There is something almost lace-like in its appearance. The rock garden is the favourite place for this *Speedwell*; but I was greatly struck with its beauty as a wall plant on seeing it at Monreith, Wigtownshire, the other day, where Sir Herbert Maxwell has such a fine collection of alpinists

growing on a terrace retaining wall. Here *Veronica filifolia* was remarkably fine. In perfect health, of good size and full of flower, it was the *beau-ideal* of a wall garden plant. It is hardly likely that it would be nearly so fine without a good body of soil behind it, but with such conditions and fully open to the light it formed a grand sight that could hardly be surpassed.

Coronilla montana.—This hardy rock plant is not, apparently, a popular one, being probably less frequently offered by nurserymen than its merits would warrant. It is a capital rock garden plant, making good sheets of pleasing leaves and giving a good display of its bright yellow flower-heads. I have never met with it so fine as on the wall garden of Sir Herbert Maxwell at Monreith, Wigtownshire. There a large plant on the retaining wall of a terrace at the garden front was in full bloom the first week of June, and was really magnificent. The mass of flower was of the brightest golden colour, casting into the shade the

THE FLOWER GARDEN.

THE HERBACEOUS BORDER.

THESE borders are now full of many beautiful flowering subjects. Constant attention should be afforded the plants. To maintain a continuous supply of healthy growth and abundance of flowers it is necessary to note and carefully minister to the wants of each individual subject. In large mixed borders, gross feeders, such as Delphiniums, Hollyhocks, Dahlias, Asters and many others, are often in need of copious supplies of liquid manure-water. Other subjects growing in light soil may require a mulch of decayed manure. The question of staking plants, so as to prevent the growths being damaged or the flowers broken off by wind, demands a good deal of careful consideration. Strong-growing plants must be provided with



ROCKWORK AND STEPS IN A READER'S GARDEN.

other yellow flowers in its vicinity, and especially bright in the sunshine. With the writer it does not flower so freely, and he attributes this to the more sunny position at Monreith, the greater heat from the wall, and possibly to the fact that there are a good many broken shells among the soil in which the *Coronilla* is planted. On the ordinary rockery it is seldom so fine as at Monreith.—**S. ARNOTT.**

FORTHCOMING EVENTS.

July 2.—Royal Horticultural Society's Summer Show at Holland House (three days). Gloucestershire Rose and Sweet Pea Show. Scottish Horticultural Association's Meeting. Epsom Rose Show.

July 3.—Royal Agricultural Show at Doncaster (four days). Croydon Show. Penarth Rose Show.

July 4.—Ipswich and East of England Show. Norwich Rose Show.

July 5.—Maidstone Rose Show.

July 6.—Société Française d'Horticulture de Londres Meeting.

strong supports. At the same time, the object should be to make these supports as inconspicuous as possible. A timely thinning of the shoots of many plants is perhaps an operation which many amateurs fail in carrying out. It is, however, the best way to obtain good results with many of the subjects which throw up numerous shoots from their base, such as Asters, Solidagos, Helianthus and many others. Weeds should never be allowed to grow in the borders, and the Dutch hoe should be plied frequently between the plants. Water should be applied copiously in the absence of rain. Notes should be taken of the habits of any recently-acquired plants. Further notes also on the border as a whole, or any particular plant which does not seem happy in its surroundings, will prove most useful later on when a general rearrangement of the plants may be carried out. One of the most difficult problems of the herbaceous border is that often experienced of keeping up a continual display with no unsightly gaps. Much may be done by filling in with summer

flowering subjects grown on in pots for this purpose. The use of annuals, either sowing the seed in the border or introducing young plants, will in many cases prove successful. It is wise to have a full scheme prepared and provided for in advance. The practice of providing borders of plants flowering at different seasons has much to recommend it; but many gardens, both large and small, possess borders which their owners desire should be made as bright and interesting for as long a period as possible. Dead flowers should be removed, and everything made tidy and neat. The hardy plants of our gardens are real subjects of beauty, and, if they are carefully tended, are capable of producing effects which will repay fully all the care bestowed upon them. Many new plants are being added to the nursery lists, and a perusal of these lists will be a source of pleasure and profit to the ardent cultivator.

C. RUSE.

Lambay Island, County Dublin.

SEASONABLE NOTES ON AURICULAS.

Fresh Air.—If there is one thing more than another that the show and alpine Auriculas appreciate at all seasons of the year it is fresh air, and the tyro in their cultivation is warned that unless he is prepared to afford it in absolutely unlimited quantities, he must not expect to attain the most beautiful results. In the winter a certain amount of discretion has obviously to be exercised in the admission of air either to a house or a frame, but in the summer let the plants have all they can get and they will be the better for it. When torrential rains are falling one would not, of course, have the light right off the frame, because the soil in the pots might conceivably be so sodden as to turn sour and thus cause serious injury, but even then the light must not be closed down, and whenever the conditions are favourable it should be open.

Cleanliness.—Notwithstanding the indisputable fact that Auriculas are among the best of all plants for culture in cold greenhouses and frames in town gardens where the atmospheric conditions, even in the most favourable of circumstances, are never too pure, there are no plants which demand more scrupulous cleanliness. The soil, the crocks, the pots, the surroundings in the structure and the plants themselves must all be spotlessly clear if excellent health, which spells satisfactory progress, is to be maintained. The grower must, therefore, spare no pains which will go to ensure the desirable condition, or he will soon see signs of deterioration in the appearance of his cherished plants.

Sickly Plants.—The careful cultivator will look over all his collection at least once a day, and if the time can be spared he will do it twice; but at frequent intervals, in no case fewer than

once a week in the summer-time, he will subject them to a keen inspection, so that he may not fail to detect a plant that is on the sickly side directly the indications are visible. The trouble may be due to thrips, red spider, the root aphid, or the stem-boring maggot, but whatever it is, instant suppression must be the order of the place. In previous notes suggestions have been made as to the best steps to take in case either of these conditions should occur, and readers who are not familiar with the management of the plants are advised to refer back and diligently study the articles.

Sunshine or Shade.—Broadly speaking, the greater majority of plants grown in British gardens

points of view it is perfectly satisfactory to do so, but they are strongly urged to devote more than the ordinary care and attention to the plants for the first two or three weeks. The precise conditions of management differ slightly in every garden, and the changed surroundings may bring an element of trouble. There is not, as a rule, anything to worry about, but it pays over and over again to be watchful as a preventive of potential disappointment.

Seed-Sowing.—It has been said in earlier articles that the seeds now developing will become ripe at some time during July, and the grower will shortly have to decide whether he will sow immediately or defer the operation until the spring; there must be no half measures in this matter. Personally, I prefer sowing directly the seeds are ready, as I find that germination is more regular and the youngsters grow forward rather stronger; but those who do not find it convenient need not anticipate that the seeds will lose in vitality or that they will not secure eventual satisfaction. It is a matter of fancy and convenience when the work should be done. F. R.



ST. BAVO ANEMONES. A NEW RACE AFTER THE FULGENS TYPE.

revel in all the sunshine which our climate affords; but this is not the case with Auriculas. During the hot summer months it is imperative that the frame shall be given a northerly aspect, as the rays of the sun, even though there be some shade, will bring in their train troubles which the cultivator will experience difficulty in overcoming. The sunshine of winter is a different thing. Then the power is much less, and the plants will not thrive for long unless they have all the light that it is possible to afford them; but now, if it has not already been done, turn to the north.

Importations.—Amateurs commonly import plants during the summer-time, and from many

grandiflora—that strikingly handsome green-ringed, wide-petalled, Grecian type of Windflower—was observed to vary somewhat in colour and to incline to a much paler shade than the ordinary. It was marked and seed saved and sown. In the third and fourth generations further breaks appeared, and these have been added to by each successive sowing until to-day we have the new race in almost all the colours of the rainbow. I heard from headquarters two or three weeks ago that the firm had decided to name them the St. Bavo Anemones, as they have begun life within sight of the "great church" of the town whose titular saint is St. Bavo, JOSEPH JACOB.

ST. BAVO ANEMONES.

DURING my visit to Haarlem this spring, it was my good fortune to go to Mr. van Tubergen's nursery on a sunny morning when the whole of these glorious Anemones were wide open in all their brilliance and splendour. There was a wide range of colour, from the richest reds to pale creams, almost white, and innumerable shades of purples and blues. Growing close to them were a few beds of M. Emile Gadaecan's stellata type, but these in comparison with the St. Bavo were dull and insipid. This new race is distinguished by its bright colours, the width of its petals, and the great dark boss in the centre of each bloom which proclaims its relationship with the fulgens type. Its origin is interesting and suggestive. It is another example to add to the long list of horticultural triumphs which have had their beginning in some slight difference of colour or form which the observant eye has noted, and which patient care and selection have perfected. About ten years ago a solitary plant of *A. fulgens annulata*

THE ROSE GARDEN.

BEAUTIFUL NEW POLYANTHA ROSES.

SOME charming novelties are appearing in this very useful section, and one of special beauty and charm is

Tip-Top, a most lovely blending of carmine on the inside of the petals, and buttercup yellow on the back of the petals. When it was shown to visitors recently, they exclaimed, "Why, it is a Baby Juliet!" so this will give one an idea of its novel colouring.

Mieze is another charming kind, as perfect in form as Cecile Brunner, but of quite amber apricot tints, with shades of pink and orange, and the buds before they open are almost red. An altogether charming sort.

Mrs. Taft will supplant Mme. N. Levassieur. It is a lovely soft rosy crimson colour; nice bushy habit.

White Cecile Brunner is a gem. Some of its flowers are pure white, others sulphur or chamois. It possesses all the exquisite shape of the well-known Cecile Brunner.

Jeanne d'Arc, a most free-flowering variety, with fine bunches of tiny milk white blooms. It is practically always in flower, and would make a fine plant for bordering with Jessie as a background.

Cyclope in form is like a double Primrose; its colour is deep violet purple; dark foliage.

Bettelstudent has single blooms, produced in clusters. They are deep carmine in colour, with white centre. It is a very free and effective kind.

No one should miss an opportunity of planting the larger-flowered section, of which there are now some beautiful things. They come very near to the Hybrid Teas, but as decorative subjects they are fine.

Gruss an Aachen has reddish orange buds, opening light pink. A most charming Rose of free growth.

Yvonne Rabier is a glorious pure white, one of the most decorative Roses we have had for a long time. Its flowers are quite large, almost like Aimée Vibert, but produced in big clusters, erect in growth and dense in floriferousness.

Maman Turbat is also fine, a lovely satiny pink as seen under glass, also with huge clusters produced in erect form.

These would be fit companions to the older Mosella and Clothilde Soupert, Roses not seen much now, but very lovely.

A CHARMING SINGLE ROSE.

ONE of the loveliest objects in my garden in May and early June was a fine plant of *Rosa sinica* Anemone running over old tree stumps set up for the purpose. At first sight visitors took it to be a very early-flowering Clematis, but on closer inspection, of course, they were soon undeceived. Apart from the beauty of its handsome rose pink blooms, which are often 5 inches across, the olive green, shining foliage is really beautiful, and after the short flowering season the plant remains an object of

much beauty for its foliage. We have now still another beautiful addition in Mrs. A. Kingsmill, a seedling from *R. sinica* Anemone, which is of more bushy form, and what is indeed very valuable, it is autumn-flowering. It is the second cross from a species, which is proof, if any were needed, that most remarkable results may follow the hybridising of the various lovely species with our modern ever-blooming Roses.

ROSE FRANCIS CHARTERIS SETON.

OF the many grand emanations from Waltham Cross, the above-named will, I think, prove one of the best. It has been glorious with me under glass, and for this purpose alone I can strongly recommend it. The colour is such a lovely warm cherry pink. Then, the build of the bloom is such as will commend it to exhibitors—high-centred, with tapering point in the half-open stage, fine outer petals, pointed as in La France, and with great

WISLEY GARDENS IN JUNE.

THIS is perhaps the most interesting time of the whole year at Wisley, for during the latter days of June the Roses, Pæonies, Delphiniums, the spacious water garden, the woodland and wild garden are seen in the height of perfection. From their natural surroundings, isolated position and congenial soil, the Royal Horticultural Society's gardens at Wisley are most pleasantly situated. Moreover, the gardens are bathed in the pure air for which the Surrey Hills are noted. Hence it is that vegetation of all kinds, from large coniferous trees to the daintiest of alpines, flourishes amazingly at Wisley, while many of the same plants cannot be persuaded to eke out an existence a few miles nearer London.



A CORNER OF THE WATER GARDEN AT WISLEY, SHOWING IRIS KÄMPFERI NEAR THE WATER'S EDGE.

fulness, which will make it a good "stayer" on a hot day. The growth is good and the flowers are borne upright, which is a great desideratum for a forcing Rose, and also for garden culture. Then, too, its fragrance is of that nature we used to love so much in the old Hybrid Perpetuals. Raisers would do well if they employed the Hybrid Perpetuals as seed parents more than they do; far better than to rely upon crossing Hybrid Teas with the same tribe. We should then not only obtain fragrance and size, but also some of the richer shades of colour we want so much in our present-day Roses. Another Rose that Messrs. William Paul and Son distributed last year, namely, Lady Downe, is one likely to be heard much of. This, too, is deliciously sweet, and has a fine colour, almost like Mme. Ravary in its tint, with splendid stiff flower-stems.

By reason of the distance between Wisley and any railway station (the gardens are about five miles from Weybridge Station), comparatively few visitors find their way to the gardens, but those who do so are more than repaid for their efforts. The impressions of a recent visit, together with the illustrations of these notable gardens, will, no doubt, be perused with interest by those who have not the time at their disposal to make a personal visit.

Roses at Wisley.—A long Rose walk, with dwarf Roses in the border and ramblers in the background, is now in full bloom. In the very comprehensive collection of bush Roses it is gratifying to note that such old favourites as Caroline Testout, Mme. Hoste, Mrs. J. Laing and La France still hold their own in competition with their many new rivals. The ramblers are trained over upright

rustic poles. Three stout poles, tied in at the top to form a tripod, are placed to each variety. We have on previous occasions drawn attention to this mode of training Roses, and it is certainly one of the simplest and most effective means of growing ramblers. The plants in question are yielding a profusion of bloom, and the rustic work in most instances is completely hidden from view. Three of the best varieties grown in this way are Una (white), Léontine Gervaise (apricot) and Jules Levacher (pink). A climbing plant in the Rose walk, likewise growing over rustic poles, has the misfortune to bear the name of *Polygonum baldschuanicum*. It is a rampant climber from Bokhara, and produces masses of rose-tinted white flowers in the wildest profusion. Roses do remarkably well in this delightful garden, and this is a little surprising, as the soil is of a light and somewhat leaty nature. Weeping standards are a great success, and constitute a most pleasing feature. On this page we give an illustration of the variety François Guillot, grafted about four feet from the ground, and clothed with bloom down to the soil-level. Other promising varieties growing in a similar manner are Elise Robichon, Alexandre Pirault and Joseph Billard. In view of the admirable way in which Roses grow in different parts of the gardens, it is to be hoped that in the near future the society will establish a model Rose garden at Wisley. This proposal is warmly supported by members of the society, and we wish all possible success to this praiseworthy scheme.

The Wild Garden.—The real charm of these noted gardens is found in the wild garden, which is quite hidden by trees and shrubby vegetation from the outer world. Here at every turn one meets with something good to see, and certainly worthy of study and emulation. It was this garden that its late owner, Mr. G. F. Wilson, V.M.H., loved so well. The visitor is led by way of crude paths and stepping-stones here and there between luxuriantly-growing Bamboos and Rhododendrons, the latter flowering exceptionally well this year. *Rhododendron Wilsonii*, with small Azalea-like pink flowers, is just now a perfect mass of bloom. *Kalmias*, which are also peat-loving plants, are now flowering with great freedom. Some remarkably good clumps of the New Zealand Flax (*Phormium tenax*), this year producing seed in quantity, were also noted, while in the dense shade of overhanging trees many kinds of Lilies are seen. The Giant Lily (*Lilium giganteum*) and its colony of seedlings look particularly happy amid their wild surroundings. In passing what might at first sight be regarded as a neglected ditch, one observes healthy clumps of *Primula japonica*, Wood Lilies, *Trollius* and other moisture-loving plants in a congenial home, while a grand clump of *Shortia*

galacifolia near by did not escape notice. British Orchids abound on all sides in this delightful garden. One feature of exceptional interest is the naturalising of *Dictamnus albus* and *D. purpureus* in grass. The spicy-scented flowers are now seen at their best, and the illustration gives a good idea of the freedom with which *Dictamnus* blooms under these conditions.

Plants by the Water-side.—The rich and varied hues of the Japanese Iris (*I. Kämpferi*) are now

Saxifrages and Rock Roses give one an idea of the beauty this garden will attain in the course of time. An admirably-constructed dripping well is one of the chief features, while the moraine garden is sure to appeal to all lovers of alpine gardening. The latter is already planted with some of the daintiest of alpines, which are notoriously the most difficult to cultivate.

A large field of Pæonies is now gay with blossom. The new Imperial section, with outer shell-like guard petals surrounding a cluster of golden petaloids, are well represented in the collection. There are many promising varieties of Delphiniums in an extensive trial. Some have grown with most astonishing vigour, attaining a height of 15 feet. If the competition were for height, there would be many worthy competitors. As this trial has since been judged, the varieties will be commented upon in an early issue.

The gardens consist of about sixty acres of land, and not only are they noted for their beauty, but are also worthy of note from the point of utility. Several acres of fruit trees have been planted, and an outdoor vineyard has been started as an experiment. Trials of vegetables, as well as of flowers, are continually in progress, and an extensive range of glass-houses, including orchard-house, vinery, stove, Orchid-house and propagating-pits, enable all departments of horticulture to be represented.

KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Asparagus - Beds.—With the end of the present month all cutting from beds of this delicious vegetable must cease for the year. It is quite certain that many amateurs will never allow themselves to be persuaded of the immense importance of this ride, and the result is that their beds soon begin to lose vigour, and that, of course, spells lack of productiveness. If a definite principle is laid down to

retain the first and second shoots which spring through the surface each season, and that cutting shall stop at the end of June, it is not difficult so to manage the beds that they continue profitable for considerably more than a generation. The complete cessation of cutting must not, however, be accepted as meaning that no further attention need be given to the plants; as a matter of fact, this is the most important period of progress, because the foundation of next season's success is laid now. See that the soil in the beds never becomes dry; and should an opportunity arise to follow watering with a heavy soaking or two of good liquid manure, by all means seize it. In order to make sure that all food in the ground goes to the benefit of the plants, weeds must be rigidly suppressed, and in no circumstances whatever must a single shoot be cut out. In exposed



A WEEPING STANDARD OF ROSE FRANCOIS GUILLOT IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS.

showing to the best advantage by the water-side, and Water Lilies, including *W. E. Gladstone* (large ivory white), *Froehelii* (deep red), *Mariacea chromatella* (yellow), *M. carnea* (blush pink), *Robinsonii* (rosy crimson) and *ellisiana* (rosy red), are all to be seen in the height of perfection. Our illustration on page 329 depicts a corner of the water garden, in which *Iris Kämpferi* and *Nymphaeas* may be seen in flower, while the background comprises Royal Ferns (*Osmunda regalis*) and the noble-looking *Gunnera* with large, spreading leaves. In another direction an immense rock garden has recently been constructed. It is situated on high, sloping ground, and, when the alps are a little better established, will doubtless be reckoned among the finest rock gardens in the country. The result of recent planting is already apparent, and the flowering patches of Sea Pinks,

positions there is liability of damage by winds, and steps must be taken to prevent it. Stout supports at intervals, with strong string stretched between, answer admirably.

Green Vegetables.—Throughout July all favourable chances should be grasped to plant the green vegetables which will prove of such immense value during the autumn, winter and spring months. The desirability of carrying out this work in showery weather cannot be doubted; but it is not wise to wait too long for the rain, which may not come for weeks at a stretch, as witness the conditions that prevailed last summer. When ground falls vacant which it is intended to occupy with these plants, prepare it immediately, allow it to lie vacant for a time to sweeten, and then get the occupants into their places as soon as can be managed. To put the roots into soil that is as dry as dust is a serious error, which the experienced cultivator avoids by heavy watering the evening before planting is to be carried out. If water cannot be afforded for the whole quarter, soak the particular places where the plants are to go. This prevents in large measure the severe check to advancement that flagging must necessarily inflict.

Celery Fly.—Careful growers have been incessantly on the watch for this pest since the plants

were first moved from the seed-boxes to the nursery beds, and it is most important that there shall be no relaxation of vigilance. It is folly to wait until the fly has pierced the leaves and deposited the egg, as one can then do nothing that is of substantial good. Instead, proceed with preventive measures, and comparatively little harm will ensue. Frequent dustings with a mixture of old soot and wood-ashes are excellent if done when the leaves are damp; but the utmost care must be exercised not to let the stuff get into the hearts, or the colour of the stems will be completely ruined.

Spring Cabbages.—The correct time for sowing seeds of Cabbages to yield most welcome produce in the early months of the spring varies with every district, and in some slight degree with every season. I am a staunch advocate of two sowings, the first on the accepted best date, and the second fifteen days or so later. This practically precludes failure due to the plants growing so freely in an open autumn that they become too "proud" to stand the variable weather of the winter. As we all sow too thickly, the double expedient need not involve greater outlay; simply divide the usual quantity into two and go ahead.

Outdoor Tomatoes.—These will demand regular attention from now onwards until the whole of

the fruits have been gathered for use. In practically all instances they will have settled down admirably, and it is important that the soil shall never be allowed to become as dry as dust; on the other hand, it is fatal to make it sodden. Each shoot that is seen springing in the leaf-axils must be rubbed out before it is half an inch in length, as concentration to one stem is essential to the finest results. Malformed flowers should be picked out directly they are seen. H. J.

LATE DWARF FRENCH BEANS.

A LATE sowing—indeed, several sowings—from the end of June well into August will provide a welcome supply at a time of year when choice vegetables are getting somewhat scarce. Of late years the Dwarf or Kidney Bean has found less favour for home supplies, on account of the taller Climbing French being largely grown; but this should not be so when vegetables of the best quality are in constant demand, as the Dwarf French is most valuable if the produce is well grown. I am aware that for market purposes it is less popular than the Runner, but for home supplies we should not study market procedure, but endeavour to get the best possible quality.

It is useless to grow this vegetable in poor soil, and heavy clay land well repays liberal additions



A FINE COLONY OF DICTAMNUS NATURALISED IN GRASS IN THE WISLEY GARDENS.

of lighter materials, such as burnt garden refuse, old leaf-soil, or spent manure, and if this cannot be incorporated with the soil, it is a good plan to place a liberal amount in each trench previous to sowing. In poor or heavy land I would advise deep drills or shallow trenches, as, grown thus, the necessary waterings and feeding to obtain good results in a dry season are readily given. In such land I have found spent Mushroom-manure an invaluable aid, as it not only lightens the soil but retains the moisture, and as the Dwarf Bean is a crop quickly cleared, unless food and moisture are given the results are poor. And this opens out another question: Why grow the Dwarf Bean when the Runner can be grown with less labour? But as a distinct second-course vegetable the Runner is less useful. The Dwarf in this respect cannot be equalled, and when well grown is delicious. By the term "well grown" I do not mean large pods, but small ones. If these are gathered regularly so that the seeds have not matured, the quality will be much superior and the pods will require very little preparation for the table.

It is a good plan to gather the pods and either place the stalk end in water or damp the pods and lay them in a cool place till required for use. A word should be given as to the cooking. Often the pods are allowed to get too old, but if they are young there is no necessity for the slicing and paring. Cooked whole they are delicious, and the flavour is then much better than when served, as is often done, with the seeds well advanced and the pods tough and flavourless.

Those who have not grown the Dwarf French for a late supply will be surprised at the good results obtained by late crops. It should be pointed out that in the culture, say, for August supplies, a cooler site or border should be selected, and thin sowing is strongly advised; failing this, thin freely so that each plant can have room to develop. It is well in dry weather to soak the seeds for some hours to assist them to germinate more quickly, also to well water the drills or trenches.

For a quick crop the smaller-podding varieties should be chosen, and for a longer supply those of the Canadian Wonder type or Magnum Bonum. For cooking whole, the Stringless Beans are a splendid vegetable. In this section there are numerous varieties, such as Holborn Wonder, Canadian Glory, Bountiful and others. The Golden Waxpod or Butter Beans make a splendid addition to the list of late summer vegetables. This variety is of great value when well grown. Such kinds as the one named *o*: the Centenary, Golden-podded Mont d'Or and Dwarf are excellent when cooked whole as advised above.

G. WYTHES.

TREES AND SHRUBS.

RHODODENDRON VASEYI.

THIS is a comparatively little-known species, a native of Carolina. As a garden plant it is more often referred to as an Azalea, being deciduous and flowering in advance of the leaves. The individual blooms are about an inch across. The shade of colour varies considerably in a batch of seedlings, from white, pale pink or rose to occasionally a rich deep rose. The flowering season is the end of April and early in May. Like most of the



A FLOWERING SPRAY OF RHODODENDRON VASEYI, A LITTLE-KNOWN SPECIES FROM CAROLINA.

Azaleas, this one flowers freely in a small state some 15 inches to 18 inches in height, though, according to "Garden and Forest," in its native habitat the plants grow to a height of 15 feet or more. In addition to propagation by seeds, cuttings made of the half-matured growths towards the end of July will root in a propagating-frame with a slight bottom-heat.

CLEMATIS FLAMMULA.

The delightful fragrance of this Clematis has been likened to that of the Hawthorn. It is not a tall grower; 6 feet to 8 feet appears to be about the

average height. The flowers are creamy white and about an inch across. During July and August the plants are clothed with axillary and terminal panicles of blossoms, these giving place in September and October to the heads of fruits with the familiar feathery tails. *C. Flammula*, which has been named the Virgin's Bower, is fairly well known in gardens, but not nearly so much as its merits deserve. When covering trellis-work or clothing an arbour near a dwelling-house, the air all round is perfumed with its fragrance when in flower, the beauty of blossom and seed lasting for fully four months.

It is a native of Central and Southern Europe, and has been known in gardens for more than three hundred years. For small vases the flowers may be employed effectively for cut-flower decoration, while in large vases it may be used in association with other flowers as the better-known *Gypsophila* is employed. One disadvantage is that the blossoms do not last as long as the *Gypsophila*, but they have an advantage over the last-named in being fragrant. *C. Flammula* requires very little attention in respect of pruning. In spring, when the growth-buds show prominently in the axils of the leaves, the old flowering growths should be removed down to these points. A. O.

A CHINESE BARBERRY.

(*BERBERIS DICTYOPHYLLA ALBICAULIS*.)

BERBERIS DICTYOPHYLLA is a showy Barberry from China, which appears to have been first brought to notice by Franchet, who found it among the specimens collected by R. P. Farges. It has been in cultivation long enough to prove that it is likely to make a good garden plant, for it grows at least 4 feet high, is of good habit, and bears showy yellow flowers and conspicuous scarlet fruit. Moreover, the under sides of the leaves are glaucous, while the stems also have a glaucous hue. The variety *albicaulis*, however, is of more recent introduction. It appears to be of looser habit than the type, and the peculiarity which appeals most forcibly to the gardener who is on the look-out for ornamental garden plants is the dense glaucous covering which appears on the stems. The under sides of the leaves are also whiter than those of the type. As it becomes better known, it ought to form an interesting addition to the list of coloured-stemmed shrubs. From this standpoint it is certainly the most conspicuous of the numerous varieties of *Berberis*. As is the case with other coloured-stemmed plants, the colour is most highly developed on vigorous branches; hence the necessity for planting it in fairly good soil. In association with coloured-stemmed Willows, Dogwoods and Brambles it is fine for winter effect. W. D.

GARDENING FOR BEGINNERS.

THE SUMMER PROPAGATION OF ROSES FROM CUTTINGS.



1.—ROSE SHOOTS THAT HAVE PRODUCED FLOWERS MAKE THE BEST CUTTINGS.

IT often happens that the beginner in gardening matters is desirous of increasing his stock of Roses, but has no clear idea as to how the work should be done, and the following notes have been prepared for his guidance.

Rose cuttings may be taken at two different periods, namely, when the young wood is just becoming firm, about July, and when the wood is thoroughly ripe and the leaves have fallen. Cuttings of the latter kind are prepared during late autumn and early winter, and such cuttings are usually made from 9 inches to 12 inches in length and inserted in the open ground, all but the upper 3 inches of each cutting being buried in the ground. Cuttings made in summer, however, are treated very differently, for they are rarely made more than 4 inches or 5 inches in length, and are usually rooted in a frame or propagating-case, although good results may be obtained by inserting them under a hand-light out of doors. All kinds of Roses are not suitable for summer propagation. Generally speaking, those kinds which form roots quickly, such as the various Teas, Hybrid Teas, Ramblers, the less spiny Hybrid Perpetuals and the China Roses, may be increased



3.—ON THE LEFT, ROSE CUTTINGS MADE WITH TWO EYES ONLY; THESE ROOT READILY IN HOTBEDS, NORMAL CUTTINGS ON THE RIGHT.

during summer, whereas kinds which have their branches thickly beset with spines, such as the Rugosa hybrids, Scotch Roses and Moss Roses do not root readily.

The most suitable wood for cuttings is that which is becoming rather firm, such as short, flowerless shoots, branches which have flowered (see Fig. 1), or the lower parts of the long growths of ramblers which have been formed during the present year. Soft, pithy shoots are worthless for cuttings, and those of moderate growth are usually more satisfactory than very vigorous branches. Cuttings may contain from four to five buds, although if wood is scarce it is not necessary to allow each cutting more than two buds, one to form roots

and the other to form a shoot. When making cuttings, cut the branch through horizontally, just below a bud for the base of the cutting, the upper part being made with a slanting cut just above a bud. Remove the lower leaf or leaves, and if the upper leaves are very large, reduce the size. Do not remove any of the buds, for it is a good plan to encourage growths from beneath the soil in the case of Roses growing upon their own roots. From the time the shoots are removed from the bushes until the cuttings are inserted, they must never be allowed to become dry. When collecting cuttings it is a good plan to have a basket partly filled with damp moss, in which the branches, and afterwards the cuttings, can be laid and covered over until ready for insertion.

Compost.—The most suitable compost for Rose cuttings is made up of three parts good, sweet loam, one part leaf-mould and one part silver sand. Whether used in pots or in beds, it must be made moderately firm, and the upper inch should have been passed through a sieve with a half-inch mesh. Over the soil a thin layer of silver sand may be placed with advantage. When the cuttings are placed in pots, the sizes known as

5-inch and 6-inch are the handiest sizes to use (see Fig. 2). As a rule, the cuttings nearest the sides of the pots root a little in advance of those placed in the centre, a fact to be borne in mind when inserting cuttings. The depth to which cuttings are buried in the soil deserves consideration, for on this a great deal depends as to whether they will root well or not. As a guide it may be added that the regulation depth for this class of cutting is that one-third of the length should be buried in the soil. When heat can be employed, the cuttings may be expected to root in from

two to three weeks' time. Where a propagating house exists, heat is always available; but such a structure is not essential to success, for quite as good results can be obtained by plunging the cutting-pots in an ordinary hotbed made of manure, such as is often employed for Cucumbers. In fact, where large quantities of Roses are required in some American nurseries, the habit obtains of making up hotbeds, covering them with soil, and dibbling the cuttings in 1 inch apart each way. The cuttings are made with two eyes each (see Fig. 3), one for rooting and one for growing. The frames are kept very moist and close, but shaded from bright sun, exposure to fierce sunlight for ten or fifteen minutes being sufficient to ram the whole bed by scalding. In from ten to fourteen days the majority of the cuttings inserted in this way have rooted, when they are gradually hardened off and potted. The pots should be plunged in Cocoanut fibre to help to keep the soil moist, and the atmosphere of the frame or case must be kept moist and close, shading being



2.—A POT OF ROSE CUTTINGS. THESE MAY BE EXPECTED TO ROOT IN FROM TWO TO THREE WEEKS' TIME.

employed during periods of bright sunshine. In the absence of artificial heat, place the cuttings in a close, cold frame or under a hand-light, where they may be expected to root, but not in such a short space of time as when heat is employed. The young plants may either be potted singly and kept until the following spring to be planted out, or they may be hardened off and planted out in autumn. The former is the better method for the more tender kinds.

An item to which the propagator should pay special attention is the probability of the shoots of the young plants being attacked by green fly, even before they leave the propagating-case. At the first sign of fly the leaves of the young plants should be allowed to dry, and the house must then be fumigated with tobacco or with a nicotine preparation, fumigation being repeated at intervals if necessary.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Bamboos.—These, when grown in pots or tubs, make splendid material for furnishing the greenhouse or conservatory, and are also well adapted for indoors. For this purpose select those which possess the most graceful habit, and, of course, the less hardy ones may also be included, such as *Arundinaria falcata*, *A. Falconeri*, *A. anceps* and *A. gracilis*. Now that the young growths are pushing up freely, see that the plants do not suffer at the roots for the want of water, and stimulants at intervals will prove of assistance.

Chrysanthemums.—The plants for producing large blooms that were potted into their flowering pots some three weeks ago are now growing away nicely and must be secured against wind. An excellent method much in vogue is to stand a row of plants on a board beside the garden walk, and secure them to cord or wire stretched to stout stakes at intervals. If the weather is warm and dry, syringe the plants overhead twice daily. Before the plants make too much growth, insert the sticks that are to remain, choosing them as straight as possible, strong, and at the same time neat.

Pot Roses.—The plants that have done duty for inside supplies should be stood out of doors and allowed to mature their growths. See that the plants are kept supplied with water and nourishment, and keep the foliage in a healthy condition. The repotting I prefer to carry out in the late autumn.

Manure-Water.—As many plants are now needing a good stimulant, an excellent way of producing the same is to obtain some fresh cow-manure and mix it with an equal quantity of soot, adding the latter gradually until not a dry particle is left. Place in a strong, porous bag, secure the mouth, and suspend it in a tub of water. Dilute as necessary before using. Artificial manure may be given by sprinkling it on the surface of the pots, or taking sufficient for the time and puddling it with a little water, and then putting sufficient in the can to colour the water. Never apply either of the foregoing when the plants are dry, and only when they are growing and rooting freely.

The Kitchen Garden.

General Work.—The bulk of the work now to be done in the kitchen garden will consist of keeping the crops free from weeds, and whenever the surface is dry enough, ply the Dutch hoe as frequently as possible. Any vacant spaces that will accommodate a catch-crop, such as Lettuce, should be taken advantage of. All crops as they pass should not be allowed to occupy good ground, but be cleared off and followed as quickly as possible with another crop. Watering, in the event of dry weather, should be done as thoroughly as possible, and Cauliflowers and rows of Peas will greatly benefit by applications of farmyard or liquid sewage manure.

Spinach.—Make a sowing of this at the first opportunity for picking during the winter months. By sowing fairly early a good plant is ensured. Treat the ground liberally where it is to stand.

Shallots.—These will soon be ripe, and when ready lift the bulbs and lay them out in a sunny, dry position for a day or two before putting away in a cool, dry shed. Sort over and reserve sufficient of the smallest for planting next year.

Flower Garden.

Heuchera sanguinea.—A fine patch of this is one of the most useful plants we have now in the flower garden. The graceful spikes are admirably adapted for associating with other flowers, and are most useful for table decoration. To maintain a good supply, sow a little seed each year about this season in a box and allow it to germinate in a cold frame. When large enough, transfer the seedlings to boxes, where they may remain during the winter.

Border Carnations.—Keep the hoe going between the plants, and in showery weather give a dusting of soot between them. Attend to the tying of the flower-spikes as they lengthen.

Perennials.—The present is a good time for sowing any of these for the borders at a later

date, and affords considerable interest besides oftentimes obtaining more vigorous plants. They may be sown in the open ground, but it is preferable to sow in pots or boxes and keep damped and shaded in a cold frame until germinated, when the seedlings may be pricked out into a border.

Wallflowers.—The earliest-sown plants will now be ready for transplanting on to a well-prepared piece of ground that has been made fairly firm, so that the plants will make a good sturdy growth. A border facing east will suit them admirably. Plant in rows a foot apart and allow 10 inches between the plants. Choose showery weather for transplanting, if possible, but avoid their becoming crowded and drawn.

The Shrubberies.

Rhododendrons.—Now that the flowers are past, the bushes will present a much neater appearance if the old flower-trusses are picked off. If carefully done, they will readily part from the stems. Give the beds a good mulching of decayed cow-manure and leaf-mould or rough peat, as this will benefit the young growths now being formed. The same remarks apply also to Azaleas.

Ceanothuses.—These are making a good display in the shrubberies and are, practically speaking, hardy. Of *Ceanothus azureus* there are some excellent varieties, and these are well adapted for planting against balustrades and walls. Indigo, as its name implies, is a beautiful deep blue. Perle Rose is another excellent sort, as is also Gloire de Versailles, a vigorous variety.

Ononis rotundifolia.—This is a charming shrubby plant for the front of the shrubberies. It is easily raised from seed, which may be sown as soon as ripe. The Pea-shaped flowers are freely produced over a long season. It is also a suitable plant for the rockery.

Hypericum olympicum.—This is now a sheet of golden flowers, and also well adapted for the rock garden. As soon as the young growths that follow the flowering period are large enough, insert them in sandy soil and keep close in a cold frame, when they will soon root.

E. BECKETT, V.M.H.

Aldnam House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Hardy Shrubs.

Young Plants.—New *Deutzias*, *Philadelphuses* and any others rooted early in the year in heat and now well established in pots may be planted out in well-fertilised soil, where, before winter, they will be thoroughly established.

Ivy.—A considerable quantity of Ivy is left untrimmed till about this time, when it is closely shorn, and never fails to clothe itself with new foliage in not more than a fortnight. Where the family is in residence, this operation cannot, of course, be done at this season.

Clematis montana.—Now that the flowers are past, this early species should be hard pruned, but removing only the last year's shoots. It is best trained on arches or pergolas where the young growths can hang down, which in May and June form wreaths of lovely white blossoms.

Rosa alpina.—This early-flowering species makes a felicitous addition to the shrubbery, foliage, wood, flowers and fruit being alike handsome. It is noted for its beauty in "The Guild of Garden Lovers," but without name. It should never be pruned unless when the wood in any portion gets worn out. Given space to extend, it throws out suckers in every direction, and forms in the course of a few years a most attractive object.

Fruit-Houses.

Shading Vines.—In very hot weather do not hesitate to apply a thin shade of whitening dissolved in pure water to the glass of vineries where the Grapes are at a stage to scald. If forced upwards from a syringe, the whitening falls in spots and breaks the force of the sun's rays without unduly affecting the entrance of light.

Peaches.—Those freed of a crop may have a portion of the old wood removed, in order to give more space to that of the current year, which need not be more than required for next season's cropping. Ripening fruit may be gathered, if abundant,

before it is quite matured and stored in a perfectly cool fruit-room, where it will keep for a fortnight at least. Peaches are invariably improved in flavour when picked a day or two before being eaten.

Melons.—These will grow exceedingly fast; and after laying in a sufficient amount of growth to carry the fruits to maturity, it is very important that all the new growths which push from the axils of the main leaves be rubbed off as soon as they are large enough to handle. They are of no value to the plants, and, as a rule, are the first parts to be infested with red spider. Melons may be freely ventilated in fine weather if there is no hurry for the crop to ripen, being comparatively hardy during the summer months.

The Vegetable Garden.

Seakale.—Previous to the foliage quite covering the surface of the soil it is advantageous to apply a dressing of manure.

Peas.—As these are picked clean, the haulm should be cut over at the surface of the ground and cleared away. Besides being an eyesore, the foliage becomes a prey to mildew, which, doubtless, spreads to other crops.

Cos Lettuces.—These are better-eating than Cabbage Lettuces at this season, and they come much finer when the seedlings while still small are transplanted into very highly-manured soil. Hicks' Hardy is a variety that hearts without the necessity for tying the heads. It is a safe precaution to draw the roots through a mixture of soil and water previous to planting, and the ground should be prepared by drawing a deep drill so that they are set in soil that has not been surface-dried.

Tomatoes.—In some years these fruit fairly well when trained to warm walls, such as those of hothouses. In such instances the crop should be strictly limited to three clusters at most. It is a temptation to be always applying water, but, provided the soil is good and made firm at the time of planting, they are, as a rule, better for not being watered. It is hardly necessary to say that only the main foliage need be preserved.

Seeds to Sow.—A little Endive, white-skinned Turnips, Spinach, Lettuces and Radishes at least. All are better to have the drills saturated with water an hour or two previous to sowing, for Spinach in particular, which should be sown in extra deep drills, which need not be filled in level with the surface. Given plenty of moisture and a friable, fertile soil, the modern Spinach produces fairly large leaves even at this the worst season for it.

The Plant-Houses.

Potting.—All kinds of early winter-flowering plants should be potted into their flowering receptacles without delay.

Chrysanthemums.—Bush plants should not be stopped after this. A look-out should be kept for aphids in the points of the shoots, and tobacco powder applied should it appear. The plants will now require looking over on hot days twice daily, lest they should suffer from over-dryness at the root; all the same, do not over-water.

The Flower Garden.

Carnations.—These may now receive their final tying, and the buds be reduced in number should large blooms be essential. Border varieties in pots are now in bloom, and should be layered as soon as possible.

Lupinus polyphyllus.—There is a great variety in this handsome border plant—pink, rose, creamy white, as well as the old varieties. The primary spikes are now going over, and should be cut off before many seeds are set to enable the plant to throw up successive spikes, which plants not too old will do, provided this is done in time.

Roses.—Continue to arrange and tie the shoots of climbing varieties, which are now extending at a great rate. If standards have not yet been thinned of weakly shoots which do not show flowers, they should be removed at once. Also reduce the number of buds on very floriferous varieties, and apply another surface-dressing of quick-acting manure to enable the bushes to go on flowering, that is, to the Hybrid Teas. Take prompt measures with aphids and mildew should they appear. It is rather early in the year for orange fungus, but a sharp look-out for this also must be kept.

R. P. BROTHURSTON.

Fyninghame, Prestonkirk, N.B.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Lælio-Cattleya Baroness Emma.—This is a beautiful Orchid derived from the intercrossing of *L.-C. eximia* and *Cattleya hardyana*, so four species, viz., *C. gigas*, *C. aurea*, *L. purpurata* and *C. Warneri*, are concerned in its ancestry. The sepals and petals are a pleasing shade of mauve, while the large expanded lip is a rich purplish crimson, with a yellow area in the throat. Shown by Baron Bruno Schröder, The Dell, Egham.

Odontioda Cooksoniæ Fowler's variety.—A charming form of this popular hybrid, whose parents are *Cochlidia noetzliana* and *Odontoglossum ardentissimum*, but probably the latter was a very fine variety to produce such remarkable results. The sepals and petals are red, with a thin margin of a purplish hue, while the lip has a golden crest and a white front lobe. The flowers are about two and a-half inches across, and at first sight one would take it for an *Odontoglossum*. Surely the "scarlet" *Odontoglossum* has now arrived. Exhibited by Messrs. Charlesworth and Co., Hayward's Heath.

AWARDS OF MERIT.

Carnation Mrs. Husan Morris.—A self border variety of salmon rose colour, and of shapely appearance. Exhibited by S. Morris, Esq., Thetford.

Begonia James Braid.—A gloriously beautiful tuberous-rooted variety of intense crimson colour.

Begonia F. W. Walker.—A counterpart of the last, but of scarlet colouring. Both are very handsome, and were exhibited by Messrs. Blackmore and Langdon, Bath.

Begonia Golden Shower.—A drooping or trailing variety well suited to basket-work, and having the colour of *Rose W. A. Richardson*. Also from Messrs. Blackmore and Langdon.

Delphinium Harry Sweatham.—A semi-double variety, with medium-sized flowers of the deepest azure blue. It is very rich and telling. Exhibited by Messrs. Blackmore and Langdon, Bath.

Delphinium Lavanda.—A very distinct mauve-coloured variety of exceptional distinction and charm. From Mr. G. Ferguson, Weybridge.

Delphinium Drake.—This is a very handsome single-flowered variety of deep, clear blue, and having a conspicuous white eye.

Delphinium Tagalie.—Royal to azure blue, semi-double and very handsome.

Delphinium Lovely.—Another bold and handsome variety, of mauve and blue colour. The flowers are semi-double. This set of three came from Messrs. J. Kelway and Son, Langport, Somerset.

Eremurus Lemon Queen.—This is apparently one of the *E. Warei* forms, with self-coloured flowers of the palest lemon yellow. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Philadelphus Bouquet Blanc.—A remarkably free-flowering variety, with medium-sized, semi-double white flowers.

Philadelphus Voie Lactee.—A magnificent single white, the flowers handsome and very pure. From Messrs. James Veitch and Sons, Limited, Chelsea.

Carnation Cyclops.—A very fine yellow-ground fancy variety freely overlaid with crimson. A well-formed flower of great size.

Carnation Charles Blick.—A pure white Malmaison variety which the raiser of nearly all

the Malmaisons of commerce considers good enough to perpetuate his own name. The fact should speak volumes in its behalf. It is a wonderfully fragrant variety. These Carnations were shown by Mr. Charles Blick, Hayes, Kent.

Lavatera (Malva) Olbia.—Said to be a native of Provence, quite hardy in the southern parts of England, and a true perennial. The flowers are some three inches across, and of a pretty rosy mauve, freely borne on erect stems. Exhibited by Mr. M. Prichard, Christchurch.

Rose Effective.—A pillar variety of great promise. It is of crimson-scarlet colour, large in size and very free. Said to be the result of a cross between *Carmine Pillar* and *General Macarthur*.

Rose Pink Pearl.—A single or semi-double variety of singular beauty and charm. Its name is descriptive. These came from Messrs. Hobbies, Limited, Dereham.

Odontonia St. Alban.—A fine acquisition to this comparatively new genus, created for hybrids between *Miltonia* and *Odontoglossum*. In this instance the parents are *M. fuscatum* and *O. Pescatorei*. The flower is rather attractive, having a white ground, spotted and blotched with purple. From Messrs. Sander and Sons, St. Albans.

Miltonia bleuana Rising Sun.—Why this beautiful plant received the name of *Rising Sun* it is difficult to understand, for it is white, excepting a yellow centre. Shown by Baron Bruno Schröder, The Dell, Egham.

Lælio-Cattleya Ganymede.—This was represented by a small plant with one flower, which had apricot yellow sepals and petals and a somewhat large crimson lip for the size of the bloom. The parentage is *L. Latona* × *C. Schröderæ*, and it was exhibited by W. Walters Butler, Esq., of Edgbaston.

The foregoing were shown before the Royal Horticultural Society on June 18, when the awards were made.

AWARDS TO DELPHINIUMS AT WISLEY.

In the *Delphinium* trials conducted at Wisley during the present year, the following were considered worthy of three marks by the visiting committee, and awards of merit in each case were confirmed by the floral committee at its sitting on the 18th inst.:

Delphinium Darius.—Semi-double, creamy white.

D. Cymbeline.—Dark blue, conspicuous white eye.

D. Jessica.—Intense violet blue, white eye.

D. Lorenzo.—Rich violet purple. These were sent by Messrs. G. Bunyard and Co., Maidstone.

D. Mrs. James Kelway.—Clear Cambridge blue, white eye.

D. Smoke of War.—Violet purple, very distinct, spikes strong and handsome.

D. Dr. Lodwidge.—Metallic blue, very fine. From Messrs. Kelway and Son, Langport.

D. Mr. J. S. Brunton.—Fine clear blue, with white eye; handsome spike. From Mr. B. Ruys, Dedemsvaart, Holland.

D. Dr. Bergman, Colonel Crabbe, J. S. Sargent, Mme. E. Geny and Royal Standard.—From Messrs. Forbes and Co., Hawick.

D. Lizzie von Veen.—From Mr. J. Box, 1. ind. field.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET WILLIAM FAILING (Mrs. A.).—The plant appears to have fallen a prey to the fungus known as *Puccinia Dianthi*, though its condition when received was opposed to a definite conclusion in the case. Sweet Williams for garden purposes are best if regarded from the biennial standpoint, raising a batch of seedlings each year and discarding them when the flowering is over. It is also a good plan to provide them with a fresh bed or new position each year, and so arrange matters that a complete change of soil and site is ensured to each batch of seedling plants. In this way a greater vigour results, while the failures are reduced to a minimum.

WHITE LUPINE DROPPING ITS BUDS (M. G. R.).—The falling is most probably due to some inherent weakness on the part of the variety, or to some chemical deficiency of the soil. It may be a combination of both, as in some localities the white form is singularly prone to the defect mentioned. Try replanting in autumn, and employ chalk or lime well worked in the soil previously. It would also be well to raise seedlings continually, as these we find much more reliable and less prone to bud-dropping than are older plants subjected to division. The leafy growth in *Rose-buds* is merely a freak of Nature. We could form no opinion in respect to the *Gloire de Dijon Rose*; the buds, as indeed all your specimens, were completely dried up. To get any idea of such things, and to be at all helpful to our readers, the specimens should be packed in damp moss so as to reach us in a quite fresh state.

TREES AND SHRUBS.

PRUNING OF RIBES AND CYTISUS (W. I.).—The various kinds of ornamental flowering *Ribes* require very little pruning other than an occasional thinning, which may be done any time during summer. Should your bushes become too large for their position, however, you may both thin them and cut them back as soon as the flowers have faded. The taller-growing *Cytisuses* should be pruned as soon as the flowers have faded. They require rather careful handling, for if cut back into hard wood they rarely do any more good; therefore do not cut the branches back below the base of the previous year's wood. In the case of old straggling bushes it is as well to do away with the plants and begin again with young stock. The dwarf kinds of *Cytisus*, as a rule, may be shortened a little after flowering, but *Cytisus purpureus* should have all the old wood removed each year to make room for young shoots, which appear from the rootstock.

THE GREENHOUSE.

SOWING SEEDS FOR WINTER FLOWERS (Seedling).—It is too late now to sow some of the recognised autumn and winter flowering subjects in order to have them in bloom at that season. Primulas sown at once will flower in the winter, but for autumn blooming, extending in some cases at least well on to the end of the year, you may sow some of the annuals that do best in pots, such as *Alonsoa Warscewiczii compacta*, *Celosia pyramidalis*, *Clarkias*, *Godefias*, *Linum grandiflorum*, *Mignonette*, *Nemesias*, *Nicotiana hybrids*, *Phlox Drummondii*, *Rhodanthe Manglesii*, *Schizanthus* and *Stocks*. You speak of a heated greenhouse, in which structure the seeds of *Primulas*, *Celosia pyramidalis* and *Nicotiana hybrids* may be raised. These, however, will only need a little heat during their earlier stages. The others had better be brought up altogether without heat, otherwise they will grow up weakly, and will consequently fail to flower in a satisfactory manner.

THE ORIGIN OF THE MALMAISON CARNATION (Constant Reader).—There is no authentic knowledge of the origin or introduction of the Old Blush Malmaison Carnation, which was the first of its race to be grown in this country. Malmaison in France was a favourite residence of Joséphine, the first wife of the Emperor Napoleon I., and the gardens were celebrated for the great number of plants grown there. Whether this variety originated at Malmaison is not known; if so, it must be at least a century old. All that can be definitely said concerning it is that it first made its appearance in this country in the fifties

of last century. For some years it was not a popular flower, the blooms being too large and misshapen for the floral ideals that then prevailed. Now, however, with the present-day taste for large blooms, it is largely grown. With regard to the varieties we now have, two or three of the oldest originated as sports from the Old Blush. One of the first to take up the raising of the Malmaison was the late Mr. Martin Smith of Hayes, Kent.

FRUIT GARDEN.

GOOSEBERRY BUSHES DISEASED (*Lady R.*).—The bushes are diseased in consequence of a virulent attack of red spider, consequent on the heat and drought of April and May. This may very well not be the only reason, seeing that your bushes growing in the open are healthy and doing well. The best thing for you to do to bring the trees round will be to pick off the fruit, and to immediately spray the trees for the destruction of the spider with the following wash, taking care to well saturate every part of the bushes. The best way of applying the wash is through a Knapsack pump or a syringe. Tobacco powder, 3lb.; soft soap, three-quarters of a pound; water, ten gallons. Preparation: Infuse the Tobacco powder in water for six hours, then strain off, press the Tobacco and infuse again. Add the Tobacco extract to the dissolved soft soap and water. Apply immediately. Afterwards give the bushes a good soaking of water and a surface mulching of rotten manure. Take away the wire-netting from the roof of the enclosure and substitute for it fish-netting when wanted to protect buds in winter and fruit when ripe in summer, but not at other times.

KITCHEN GARDEN.

MAKING A MUSHROOM-BED (*A. E. F. H.*).—A Mushroom-bed could be made at any season of the year provided the materials were ready and of the right kind. The materials consist chiefly of horse-manure or very short manure from which all the long straw has been removed. Kept apart for a time, and occasionally turned to prevent undue heating and a too early decay, we have seen excellent crops of Mushrooms produced from this material alone without spawning when subsequently introduced into warmer quarters. For example, assuming that you desired a crop of Mushrooms in September or October, the manure should be selected three months in advance, and occasionally turned, as above mentioned, during the space of a month. At the end of that time a bed of manure, 9 inches or so in thickness, should be formed under a greenhouse stage, or in a cellar or outhouse not used for human habitation. The manure should be well beaten down, and a few days later, when the heat has declined, pieces of spawn some 3 inches square should be inserted at about a foot apart over the surface of the bed, subsequently surfacing the bed with soil and making the whole quite firm. For an outdoor bed the ridge principle would be best, the making and spawning being practically the same. In this case, however, a covering either of mats or litter, or both, is essential to preserve the heat of the bed and retain those uniformly moist and warm conditions which are so necessary to success. Winter beds in the open are not suggested, though the specialist out of his knowledge can ensure success where an amateur would fail.

MISCELLANEOUS.

DESTROYING WIREWORMS (*Brendon*).—It is of no use to recommend to you the use of gas-lime to destroy wireworms, as, while it is the most destructive agent, it can only be used and dug in vacant soil, while the ground carrying crops or plants cannot be so treated. You might trap the pests. For this purpose obtain large Mangel Wurzel. Cut these up into square pieces each of about eight ounces in weight, fix into each one a stick like a skewer, 12 inches long, and so tied to the Mangel pulp that the two cannot part. Bury these portions of Mangel 4 inches to 6 inches deep in the soil wherever wireworms are in evidence, the stick standing a few inches out of the ground. Examine them every three days, lifting them carefully with a fork, removing the insects found on them and destroying them. Replace these traps in the soil, as they may be used for several weeks. You would do well to persist in the use of soil fumigants.

PRIMULAS AND OTHER QUESTIONS (*A. E. F. H.*).—The seeds of the Primulas you would probably get from Messrs. Barr and Sons, King Street, Covent Garden, or from Messrs. Thomson and Morgan, Ipswich. The Iris you submit for naming is *I. graminea*. *Myosotis rupicola* may be increased by seeds or by division of the old plants after flowering. The *Lithospermum* is best raised from fresh young cuttings inserted in August and September in a cold frame or hand-light. The Mossy Saxifrage may be pulled to pieces quite freely at any time after the flowering is past, and any portions with roots attached should be replanted. Unrooted portions might be treated as cuttings, planting them in sandy soil in a shaded frame or hand-light. In the case of divisions or cuttings it is necessary that the growth be buried up to the green of the leaves, as from this point new root-fibres issue very quickly. By inserting the cuttings sufficiently deep or by planting the divisions as suggested, compact examples result in a very short time.

NAMES OF PLANTS.—*B. W.*—1, *Cistus laurifolia*; 2, *Choisya ternata*; 3, *Quercus rubra*; 4, *Fraxinus excelsior pendula*; 5, *Eunonymus japonicus*.—*Mrs. W. S. S., Beckenham.*—Rose Francois Juranville. —*Burns.*—1, Too much withered to identify; 2, *Thymus vulgaris variegata*; 3, *Origanum vulgare*; 4, *Thymus vulgaris*;

5, *Hyssopus officinalis*; 6, *Saxifraga lindleyana*; 7, *Borago officinalis*; 8, *Dianthus Rosina*; 9, *Campanula persicifolia alba*; 10, *Dianthus Mrs. Sinkins*.—*E. B. J., Dorsetshire.*—11, *Leonie Jamesch*; 14, *White Baroness*; 16, *Billiard et Barre*; the others had fallen. Please send flowers in future in a less advanced stage and pack them in damp grass.—*R. T.*—*Rhododendron undiflorum* variety.—*H. O.*—Yes; *Iris sibirica*, it varies in colour.—*G. D. W.*—*Rubus idaeus*.—*H. H. R.*—*Muscari comosum plumosum*.—*Febbery.*—1, *Ilex diplyrena*; 2, *Scilla peruviana*.—*Enthusiastic.*—1, *Acalypha macaefeaana*; 2, *Strobilanthes dyerianus*; 3, *Anthurium* species; 4, *Dieffenbachia regina*; 5, *Acalypha hispida*.—*Mrs. Leo Walsh.*—1, *Geranium sanguineum lancastriense*; 2, *Geranium sanguineum*; 3, *Viola cornuta*; 4, *Astrantia major*; 5, *Sedum hybridum*; 6, *Rose White Baroness*.—*C. W. Bucks.*—Probably *Cornus amomum*.—*J. E.*—*Pink The King*.—*T. P. G.*—*Rose Tom Wood*; 2, *Anthemis* species.—*Mrs. L. Frome.*—*Iris sibirica alba*.—*H. J. W.*—*Rose Desire Bergera*.—*An Amateur.*—*Garden Pink Anne Boleyn*.—*J. P. Rowston.*—1, *Allium Moly*; 2, *Scilla peruviana*.—*J. W., Coventry.*—*Colutea media*.—*A. G. S. F.*—1, *Careuna* species; 2, *Hoya carnosca*; 3, *Choisya ternata*; 4, *Cupressus macrocarpa*; 5, *Asplenium Nidus*; 6, 7 and 8, too scrappy to identify; 9, *Allium scorodoriolium*.—*A. E. B.*—1, *Rhus cotinoides*; 2, *Ephedra distachya*.—*Mrs. C. Q., Suffolk (?)*.—No number. *Philadelphus coronarius*; 2, *Crambe pinnatifida*; 4, *Solanum jasminoides*; 6, probably a *Gleditschia* species (specimen too poor).

SOCIETIES.

YORKSHIRE GALA.

JUNE 19, 20 AND 21.

THIS important event in the annals of horticulture once more proved a great success. The rock and water gardens were, as usual, one of the most charming features, while the displays of Roses, hardy flowers, Orchids and stove plants contributed largely to the success of this great exhibition.

STOVE PLANTS AND ORCHIDS.

The competition was good in the important group class, and once more Mr. J. Donoghue, gardener to J. Pickersill, Esq., Wetwood, Leeds, gained the premier award. It was a magnificent group, with Rambling Roses and Palms in the background, and handsome Crotons and Odontoglossums over the centre and front.

In the premier class for Orchids on a table space of 12 feet by 5 feet, plants and cut flowers were both admitted. There were three competitors. Messrs. J. Cypher and Sons, Cheltenham, secured the first prize with a very effective arrangement of *Cattleya Mossie*, *Laelo-Cattleya Fascinator*, *Odontoglossums*, *Brassia verrucosa*, *Oncidium*, *Cymbidiums* and *Miltonias*. Second prize was won by Messrs. Mansell and Hatcher with a very beautiful exhibit of *Renanthera inaequalis*, white *Odontoglossums*, *Miltonias*, *Oncidiums* and *Cattleyas*.

As in former years, the classes for specimen stove plants aroused the keenest interest. The best collection of stove and greenhouse plants in bloom came from Messrs. James Cypher and Sons, Cheltenham, who in a space 20 feet by 10 feet arranged many famous examples of *Statie profusa*, *Erica verticosa*, *E. Cavendishii*, *Clerodendron Thomsonae*, *C. Cypheri* and *Anthuriums*. Mr. W. Vause, Leamington, came second, and he showed fine examples of *Pimelea Hendersonii* and *Erica Cavendishii*.

ROCK GARDENS AND HARDY PLANTS.

As mentioned earlier in the report, rock gardens were once more a feature of the gala. Messrs. J. Backhouse and Son, Limited, York, are to be complimented on their large rock garden and water pool; it was excellent in every respect. The old weather-worn stones gave an air of reality to the design. It was planted with hardy Orchids and Primulas and a good assortment of the best subjects in season, with appropriate shrubs at points of vantage. Second, Messrs. W. Artindale and Co., Sheffield, who banked large masses of rock at the back, with a pathway at the foot, leading by a narrow stream. The front was gay with alpine flowers, while bold trusses of *Rhododendrons* dominated the higher parts of the background. Third, Mr. S. Pickering, 31, Rosslyn Street, Clifton, York, who exhibited a very meritorious design.

Messrs. J. Backhouse and Son secured first prize for a collection of hardy herbaceous perennials. We can, however, hardly say that it came within the category of a herbaceous border. The plants included *Paeonies*, *Liliums*, *Lupines*, *Irises*, *Achusa*, *Pyrethrums*, *Campanulas*, *Gladioli*, *Lychnis*, *Aquilegias*, &c., all tastefully arranged. Second, Messrs. W. Artindale and Son, who showed splendid spikes of *Ercmuri*, *Lupines*, *Verbasum pannosum*, *Delphiniums* and *Liliums* grouped among *Irises*, *Paeonies*, *Pyrethrums*, *Campanulas* and the like, all of excellent quality. Third, Messrs. G. Gibson and Co. Bedak.

Twenty alpine and herbaceous plants in pots.—This class was staged out of doors, and the exhibits numbered three. Much the best display was made by Mr. Walter Pybus, Monkton Moor, Leeds. His plants included *Nepeta violacea*, *Mimulus Filiagii*, *Campanula turbinata*, *Saxifraga pyramidalis* and *Achillea Ptarmica* The Pearl. Second, Mr. S. Pickering; *Cerastium tomentosum*, *Phlox canadensis*, *Geranium pratense* and *Funkias* were noteworthy plants in this group. Third, Mr. G. W. Planky.

ROSES.

We never remember having seen Roses shown in better form at York than on this occasion. In the class for

seventy-two blooms, not less than three dozen varieties, Messrs. D. Prior and Sons, Colchester, were the winners. A few of the best blooms were Hugh Dickson, Florence Pemberton, Mrs. W. J. Grant, A. K. Williams, Bessie Brown and Mme. Jules Graveaux. Messrs. Frank Cant and Co., Colechester, came second, with Messrs. Jarman and Co., Chard, third.

For forty-eight blooms, likewise for thirty-six blooms, Messrs. D. Prior and Sons were again successful.

Five competitors staged two dozen blooms, and here Messrs. Frank Cant and Co. came to the front with fine examples of *Gloire de Chedane Guinisseau* and *Dr. O'Donnell Brown*. Messrs. D. Prior and Sons were second.

The premier award for eighteen Roses, distinct, fell to Mr. George Prince, whose examples of *Ethel Malcolm*, Mrs. Hubert Taylor, Bessie Brown, Mme. Jules Graveaux, W. Shean and *Lady Ursula* were notably good. Messrs. D. Prior and Sons were second.

FRUIT CLASSES.

The most important class in the fruit section was for a decorated table of ripe fruit arranged on a space 10 feet by 4 feet 6 inches. Eight points were allowed each for black and white Grapes, Peaches, Nectarines and Pineapples, all other fruits to be given a maximum of six points. The flowers and their arrangement carried twenty-four points as a maximum. There were three competitors, and each showed well, the first prize being won by the Duke of Westminster, Eaton Hall (gardener, Mr. N. F. Barues). The fruits in this exhibit possessed high quality, and the decorations were light and graceful. The fruits included *Grapes Madresfield Court* and *Muscot of Alexandria*; *Nectarines Lord Napier* and *Pineapple*; *Peaches Royal George* and *Peregrine*; *Apples Etonian* and *James Grieve*; *Plums Jefferson's* and *Kirke's*; *Pears Triomphe de Vienne* and *Dr. Jules Guyot*; and *Melons Hero* of Lockinge and *Eaton Seedling*. The points awarded were: *Grapes*, 23; *Nectarines*, 13; *Peaches*, 13; *Apples*, 10; *Plums*, 9; *Pears*, 10; *Melons*, 9; which, with 20 points for decorations, made a total of 109 points. The second prize was awarded to the Duke of St. Albans, Bestwood Park, Arnold, Nottinghamshire (gardener, Mr. J. Edmonds). This exhibitor obtained 95 points, his best fruits being *Grapes Black Hamburg*, *Strawberry Royal Sovereign* and *Nectarine Lord Napier*.

The Duke of Newcastle, Clumber, Worksop (gardener, Mr. S. Barker), was first for a collection of ten kinds of fruits, with good bunches of *Foster's Seedling* and *Black Hamburg Grapes*, *Royal Sovereign Strawberries* and *Early Transparent Plums*.

We were sorry to note a serious falling off in the vegetable classes.

NON-COMPETITIVE.

Messrs. Sutton and Sons, Reading, had an exhibit of flowers and vegetables. *Melons*, *Tomatoes*, *Peas*, *Beans*, *Marrows*, *Carrots*, *Potatoes*, also other kitchen garden produce, were represented in high-quality vegetables. Large gold medal.

Robert Sydenham, Limited, Birmingham, filled rustic metal flower-holders with varieties of *Sweet Peas*, relieved with *Gypsophila*, an admirable method of displaying these pretty flowers.

Messrs. W. Cutbush and Son, Highgate, showed *Car-nations* and greenhouse plants. Special gold medal.

Messrs. Edward Webb and Sons, Wordsley, Stourbridge, staged an exhibit with flowers and vegetables. Against a background of *Hydrangeas*, *Lilies* and *Sweet Peas* were arranged *Melons*, *Tomatoes*, *Carrots*, *Beet*, *Peas*, *Onions* and other produce from this firm's seeds. A central batch of *Gloxinias* and tall *epergnes* of *Sweet Peas* at either end provided a pleasing setting to the collection. Large gold medal.

Messrs. Dobbie and Co., Edinburgh, had a grand collection of *Sweet Peas*. The varieties included *Dobbie's Scarlet*, *Elfrida Pearson* (soft pink), *True Lavender*, *Mrs. Cuthbertson* (rose and white), *Edrom Beauty* (rose, with orange standard), *Thomas Stevenson* (a magnificent vase of this beautiful orange red variety), *Lavender G. Herbert*, *Melba*, and *May Campbell* (rose marbling on cream). Large gold medal.

Mr. C. W. Bredmore, Winchester, showed 100 vases of *Sweet Peas*, representing about forty varieties. Silver-gilt medal.

Mr. W. J. Unwin, Histon, showed a choice exhibit of *Sweet Peas*. Silver medal.

Messrs. E. W. King and Co., Coggeshall, Essex, showed *Sweet Peas*, having specially good vases of each fine sort as *Mrs. Hardestack Sykes*, *Stirling Stent*, *Thomas Stevenson*, *Constance Oliver*, *Nora Unwin*, *Mrs. Cuthbertson*, *Mrs. W. J. Unwin* and *Helen Lewis*. Large gold medal.

Miss Hemus, Upton-on-Severn, exhibited *Sweet Peas* and *Iceland Popples*, the *Sweet Peas* including the varieties *Evelyn Hemus*, *Primrose Paradise*, *Helio*, *Holdfast Belle* and *Midnight*. Silver medal.

Messrs. Charlesworth and Co., Hayward's Heath, arranged a collection of choice *Orchids* in the special tent for these flowers. Notable plants were *Laelo-Cattleya canhamiana alba*, *Cattleya Mossie Wageneri*, *Odontoglossum Aireworth* and *Cattleya Mossie reinckiana*. Large silver-gilt medal.

Messrs. Sander and Sons, St. Albans, contributed a fine group of *Orchids*. Gold medal.

Messrs. Mansell and Hatcher, Rawdon, Leeds, showed choice *Orchids*, including well-flowered plants of *Cypripedium Smithii* and *Laelo-Cattleya Martinetii*. Silver-gilt medal.

Mr. J. E. Sadler, Newbury, Berkshire, showed *Odontoglossums* and *Odontodias* in a setting of *Ferns* and hardy flowers. Silver medal.

Mr. Clarence Elliott, Stevenage, had a miniature rock garden planted with *Thymus Serpyllum*, *Dianthus deltoidea albus*, *Nepeta Mussinii*, *Viola gracilis*, *Campanula Miss Willmott*, and *Oxalis enneaphylla*. Silver-gilt medal.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Apples Damaged by Hail.—We have received from a correspondent at Grimsby some Apples that were damaged by a hailstorm there on the 19th ult. The fruits were very badly bruised, and in many instances pieces were cut clean out. Our correspondent states that fully 90 per cent. of the fruits on the trees were damaged in this way.

The Spanish Broom.—This handsome Broom, botanically known as *Spartium junceum*, does not appear to be fully appreciated, for one sees it planted less frequently than the various Brooms that flower earlier in the year. It is well adapted for planting on poor and stony soils. The large golden flowers appear early in July, and are generally at their best towards the end of that month and early August.

Geranium Fremontii.—This is a neat, hardy Geranium, or Crane's-bill, from Colorado, which is doing well, and is quite hardy, after having been well tested for several years. It does not grow very rapidly, and makes a neat plant about a foot high, with purplish flowers. In its general appearance and colour it is unlike most of the other hardy Crane's-bills. On a rather dry border it thrives excellently, and is generally appreciated.

Abelia floribunda.—This charming shrub is not too frequently seen in the open in Scotland, or, for that matter, in all but a few favoured parts of England, so that it was with much pleasure that we came across it doing quite well in the garden of Mr. Carrick-Buchanan, Corsewall, Stranraer. Corsewall is situated in one of the mildest districts in Scotland. Here *Abelia floribunda* not only stands the winters well, but blooms freely, giving good clusters of its purple flowers.

Disbudding Roses.—There is an inclination on the part of many Roses this year to produce an over-abundance of bloom. By the removal of side buds the central bud has a much better chance of reaching perfection. Disbudding is regularly practised by Rose exhibitors: but in a year like this, when standard and bush Roses endeavour to produce six blooms when there is only room for one, the thinning-out of flower-buds is much to be commended, even among Roses grown for garden effect.

Cordylone (Dracæna) stricta.—A correspondent sends us from North Cornwall flowers and leaves of this useful Australian plant, with the interesting information that a plant has been flowering outside 7 feet in height. It is only in Cornwall and similarly favoured localities that it is possible to cultivate *Cordylone stricta* out of doors. In most gardens where it is grown the plant finds a place in a cool

greenhouse, while plants will live for many years in the window of a dwelling-house provided it gets a fair amount of light. The small, light blue flowers are freely produced in large panicles. The green leaves are long and narrow.

Campanula persicifolia Moerheimi.—Of the numerous varieties of *Campanula persicifolia*, this is undoubtedly one of the best of the set, and is equally valuable either as a border plant or for producing a quantity of long-stemmed flowers for cutting. The flowers are of the purest white, and are arranged in the usual campanulate form. It gives an impressive and sumptuous effect when liberally planted, and with its lasting qualities signal it out as a plant of distinct merit. It flowers during June and July, and is readily increased by division.

A Pretty Flowering Plant for the Greenhouse. There is just now in the greenhouse at Kew a double form of the Feverfew bearing the name of *Chrysanthemum Parthenium flora-plena*, which is a decidedly useful subject for decorative purposes at this season. The plants, which are freely branched, are from 18 inches to 2 feet in height, and each bears a profusion of pure white double, rosette-like blossoms a little over half an inch in diameter. A plant of easy culture, it is well worthy of a note from its distinct character and profusion of blossoms. From a decorative standpoint its effectiveness is heightened when associated with bright-coloured subjects.

A Showy Greenhouse Plant.—The greenhouse at Kew is famous for its groups of showy flowering and foliage plants, for, visit it whenever one will, there is always much to admire and little to criticise adversely. On the occasion of a recent visit we were charmed with two large groups of varieties of *Jacobinia magnifica*, which were composed of exceedingly well-grown and well-flowered plants. The varieties in question were *carnea* and *pohlana*, and we commend them to the attention of those people who have to keep a conservatory gay. Too often these plants are allowed to become leggy, but owing to careful cultivation the Kew plants were but from 12 inches to 18 inches high, with many strong branches, each one terminated with a fine inflorescence of showy red flowers. By growing in comparatively small pots it is necessary to feed such plants well if they are to be flowered in the best condition; therefore care must be taken to avoid anything in the nature of a check from the time the cuttings are rooted until the plants flower. By rooting cuttings at intervals and paying attention to stopping, batches of plants may be obtained to last over a considerable period. The effect of one of the groups at Kew is assisted by the help of a few plants of *Marguerite* Mrs. F. K. Sander.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rubus deliciosus.—Last year we had a little controversy, as I maintained that *Rubus deliciosus* seldom produced seeds, and I have just seen, in the issue for June 2, 1900, page 396, my remarks mentioning my then experience. I have brought here two seedlings raised that year. In 1899 there were letters from those who had for the first time obtained seeds, I am sure; but, unfortunately, that volume is one of only a few volumes of THE GARDEN which I have not got, so I could not refer to it. The seeds germinated very well in the open ground, whereas some sown in a pot were much later in germinating. The scarcity with which seed is produced is most remarkable.—J. R. DROOP, *Misbrooks, Capel, Surrey.*

Rose Conrad F. Meyer.—In THE GARDEN of June 8 there was an article in praise of *Rose Blanc Double de Couvert*, with which I fully agree. I should like to say a word myself for that beautiful *Rugosa Conrad F. Meyer*. I have large bushes of it in front of a shrubbery, where they show up well against the green background. About the middle of May it began to bloom, and it is still in flower (June 24). I am able to cut great bunches of the beautiful pink blooms on long, strong stems, which are so easy to arrange in water. The blooms are nearly as full and well shaped as *La France*, and almost as sweet-scented, which says a great deal. It is already throwing up great, strong shoots, 4 feet to 6 feet long, for next year. It ought to be a good hedge *Rose*, though I have not tried it so myself. In the autumn it blooms again almost as freely as in early summer. Its only drawback is its thorny stems.—AN ESSEX READER.

A Beautiful Bellflower (*Symphandra Wanneri*).—One may go a long way without coming across *Symphandra Wanneri*, sometimes called *Campanula Wanneri*, and I was pleased to see it at the Chelsea Exhibition, where it was shown by Messrs. Artindale. This Transylvanian plant has been for some time in cultivation, but is by no means plentiful. Even seeds are seldom offered, and are absent from many good catalogues of dealers in such out-of-the-way things. It is usually recognised as a biennial, and appears as such in most works of reference. I am not sure, however, that this is an invariable habit, and from what I have learned I imagine that it is a perennial in a few British gardens. Perhaps some of your readers who have had it may clear up the point. With me it proved a biennial when I grew it some years ago, although its sister flower, *S. pendula*, is a true perennial. *S. Wanneri* and *S. Hofmannii* were, however, only biennials. *S. Wanneri* was very well shown on the occasion mentioned, and it is a really pretty plant among the many beautiful ones of the race of Bellflowers, of which the *Symphandras* form a section. About six inches high and of good habit of growth, it is a pretty rock plant with its pleasing blue flowers.

Anemone palmata.—Some discussion on the difficulty of establishing the handsome *Anemone palmata* and its variety *alba* would probably be useful to many who experience some trouble with it. It is within the knowledge of the writer that there are many who have tried this *Anemone* frequently, and have procured roots at the usual time when their bulbs are received, but who, after repeated trials, have to admit that they cannot

establish it. There are a few gardens in which *A. palmata* is almost a weed; and the writer has in view one in which it seems to strive to take possession, not unsuccessfully, of two borders in a Northern garden. But plants taken from there are difficult to induce to grow, even if removed at times when they are growing freely enough, both before and after flowering. This is a very beautiful *Windflower*, especially in its white form, *alba*, which is the cause of this note being written, from the fact of the writer coming across a nice plant at the foot of a wall in a Scottish garden and in flower. Growing to about a foot high and showing admirably among other plants, *A. palmata alba* was very pretty there. The question is, why does it give so much trouble? It has ways of its own and thrives admirably in some places, but is a failure in others.—S. A.

A Beautiful Australian Shrub.—*Ozothamnus rosmarinifolius*, a charming Australian shrub, now called *Helichrysum rosmarinifolium*, but best known in gardens as *Ozothamnus rosmarinifolius*, is in full flower here, having survived for some five years or so on a south-west wall, partly sheltered from the colder winds by a bay window. It is flowering very well this season, and has quite recovered the cutting-back it received from the winter of 1910-11, when it was injured but not cut to the ground. Unfortunately, it is only suited for the warmer parts of the country, or for selected situations on walls. The writer has nowhere seen it so fine as in Ireland; but it is rather curious that in gardens which are in warmer parts than this, *O. rosmarinifolius* cannot be retained for long. Probably the soil and exact situation afforded it have a good deal to do with the matter. Here it gets full sun, a dry, rather stony soil and the fullest drainage, and a high, open position. It has never had any protection in winter. It is very beautiful with its neat foliage almost covered with thousands of its little white flowers.—S. ARNOTT, *Sunnymead, Dumfries.* [We have seen this shrub growing and flowering freely in clay soil in Essex in the open garden. It is evidently hardier than is generally supposed, unless there are two varieties.—ED.]

Garden Pests.—I have lately been trying some simple experiments for the discomfiture or destruction of such common enemies as sparrows and slugs, and I send you a brief account for publication in the hope that it may be of some service to those who, like myself, may be described as "amateur gardeners." During April I sowed afresh some thin patches on my tennis lawn with the best grass seed, covering them with netting. The usual result followed: the sparrows took the seed through the meshes, so that before the month was out I had scarcely a sprout of grass as a reward for my trouble. During the first week in May I sowed the patches afresh, covering them this time alternately with soot and Sanitas Powder, but without netting. The month being dry as a whole, both succeeded admirably; the sparrows were balked and the seed germinated. I tried the same experiment on putting out my seedlings in the flower-borders, in the hope of a similar result with slugs. Here the advantage was decidedly with the powder, as the showers soon washed away the soot, while the powder seemed to withstand them more effectively. Whatever the cause was—whether it was the more powerful smell of the powder that remained or not I cannot say—the plants around which I placed it were not eaten, and are now looking strong and healthy. I found it easier to sprinkle the powder on the spot intended for the plant, next to make the hole and insert the plant.

This powder is inexpensive if bought by the keg, and goes a long way.—A CONSTANT READER.

Exhibiting Daffodils.—I see Mr. W. A. Watts, June 22, page 314, is again on the warpath in his campaign against what he considers unfair ways of exhibiting Daffodils, and really I must say that this time, at any rate, he makes out rather a poor case. He instances an otherwise normal flower which had a refractory petal supported artificially. Well, if the flower had been normal it would not have had the refractory petal, and therefore I contend that the paper support was an aid to showing the flower in its true and correct form. I see no cause for "irritation" (or something stronger) in such a simple device. I suppose Mr. Watts would have stuck up the flower just as it was. I should not go to look at it! I am sorry to differ with such a keen florist and charming personality as Mr. Watts.—F. HERBERT CHAPMAN.

—Two letters in THE GARDEN of June 29, but no names. Why no names? "A Small Exhibitor" tells us that faking is improving to bad flowers; I do not grudge him this satisfaction! He speaks of "artistic" faking, protests that it is "above board," and commends it as a means by which he and other small exhibitors with bad flowers can gain some advantage over the big men. With good flowers is this any recommendation? I have seen far more faking among the big men than the little ones! Surely, too, when he talks of *débutantes* appearing at a *Levé* he is giving his fancy too free a rein. Then there is "A. C. C. R.'s" letter. Again, why only initials? He would put words into my mouth that I have never spoken, and pays but a poor compliment to judges in general. Certainly I would advise "A. C. C. R." to follow a lead if it is a good one, but do not follow "A Small Exhibitor" with his doubtful methods. I assure him that the public want to see good flowers, shown as grown and tastefully arranged. They do not want to see "moderate or worse" blooms faked into shape in order to enable "A Small Exhibitor," or even a large one, to gain prizes against those who show their flowers honestly.—W. A. WATTS.

The Cherokee Rose.—I have a word to add to the paragraph on this subject in the issue of THE GARDEN of last week, page 326. This Eastern Asiatic Chinese and Japanese Rose was long ago introduced into the South-Eastern States of North America, and soon became so thoroughly naturalised in a wild condition that botanists of upwards of a century ago took it to be a native species. The history of its introduction into North America is not on record, so far as my investigations go; but André Michaux, in his "*Flora Boreali-Americana*," Vol. I., page 295 (1803), described it, under the name of *R. lavigata*, as a native of America. At an earlier period (1759) it reached this country, and appeared in the second edition of Aiton's "*Hortus Kewensis*" (1810—1813) as *Rosa sinica*, a name by which it was then generally known here. This name was given to a Chinese Rose by Linnæus; but Sereno Watson, a comparatively recent monographer of the North American Roses, arrived at the conclusion that Linnæus' *R. sinica* is the same as his *R. indica*. Hence there is no choice, and we must use the name given by Michaux. *Rosa lavigata* demands a more sunny climate than the British, and reaches perfection in the Mediterranean region, in the Canary Islands and in the South-Eastern States of North America. I have seen no wild specimens of this Rose from the Himalayas.—W. BORRING HEMSLEY.

The Seeding of Daffodils.—I notice the Rev. J. Jacob wrote recently on the seeding of Daffodils this season. The outstanding and remarkable feature noticeable here is the scanty quantity of seed produced in each pod. Pods have swollen up as usual, but in a great many cases what looks like a well-filled pod turns out to contain only about half-a-dozen seeds. I wonder if this has been the experience of others, and what the explanation may be.—F. HERBERT CHAPMAN, *Ryc.*

Primula Unique.—In your issue of June 22, on page 313, we note a short article respecting *Primula Unique*. It does not appear to be known by you that this *Primula* was raised simultaneously by ourselves and Messrs. Veitch from the same cross. The Lissadell hybrid was raised about the same time, also from the same parentage, but differs slightly in colour. The plant raised by Messrs. Veitch and the hybrid raised by ourselves, however, are, we believe, quite identical.—BEES, LIMITED.

Zonal Pelargoniums.—The correspondence in *THE GARDEN*, pages 290, June 8, and 302, June 15, respectively, is very interesting to lovers of these flowers. I am quite sure that they are gaining favour rapidly year by year. We have some very beautiful varieties to grow now, and new ones are being introduced every year. I think the true colour of the flowers of the variety *Hall Caine* is cherry red with a faint suffusion of salmon in it. Personally, I do not care for second trusses of flowers borne on the first. The variety *Phyllis* is one of the very best, both as regards flowers and habit of growth. Another, *J. M. Barrie* (*cerise*), is in the front rank; *Mrs. G. Cadbury* is a lovely salmon, and *Barbara Hope* a grand salmon pink. There is a decided orange tint in the flowers of the newer doubles; *Golden Glory*, *Fascinator* and *M. A. Arckenar* should find a place in every greenhouse. *Dagata*, a double rosy mauve, has a fine habit and constitution and bears immense trusses. Some readers may not know that *Paul Crampel* is a splendid autumn and winter bloomer.—G. G.

Euphorbia Wulfenii.—I send you a photograph of *Euphorbia Wulfenii*, which is flowering with me for the first time. It is 4 feet high and has sixty-two flower-heads, most of which are about a foot long and nine inches wide. It has been growing on a mound of light, sandy loam in a sheltered but sunny position. It was given me by Miss Jekyll about four years ago, and was then probably two or three years old. This year it has been a very striking plant, the great size of the yellow-green flower-panicles, densely packed with the cup-shaped bracts and flower-heads, forming a mass of compact inflorescence rarely seen in a plant of this size. During its growth I watered it pretty regularly, but through the drought of last summer it had no attention, which probably gave it

the conditions of heat and aridity which it likes.—ALFRED R. WALLACE, *Old Orchard, Broadstone, Dorset.* [An illustration of *Euphorbia Wulfenii* in Miss Jekyll's garden appeared in *THE GARDEN*, January 22, 1910. It is an interesting Spurge that has been the subject of much correspondence in our pages. Unfortunately, the photograph of the remarkable plant grown by our correspondent does not lend itself to reproduction.—ED.]

FORTHCOMING EVENTS.

July 8.—United Horticultural Benefit and Provident Society's Committee Meeting.

July 9.—National Rose Society's Show at Regent's Park. National Sweet Pea Society's

THE ROCK AND WATER GARDEN.

DIANTHUS NEGLECTUS.

OF the many alpine members of the *Dianthus* family, *D. neglectus* is one of the very best, growing only 3 inches or 4 inches high (even when in flower), and with narrow, tufted, grass-like foliage. It is a particularly dainty little plant for a choice place in the rock garden, in gritty soil composed of loam, leaf-mould, sand and broken brick in about equal proportions. In June the hummocks of minute leaves are studded with lovely rich carmine flowers of the most intense shade, about one inch across, while the under side of each petal is of a particularly pleasing buff colour. This is apparent as the flowers close at evening. Like most of the *Dianthus* family, this species crosses very readily with any others that may be near it, and unless protected it is generally impossible to secure pure seed.

Very often when raising *D. neglectus* from bought seed the produce is far from satisfactory, doubtless due to the foregoing fact. Cuttings can, however, be taken at this season, and pieces an inch or so long strike fairly readily in a close frame. I find full sun is the best position in my garden for this beautiful Pink, while with me it also thrives in the moraine. Unlike many of the higher alpine Pinks, it seems quite devoid of that bad habit of "going off" suddenly—for no apparent reason—it being really a very good perennial. Everyone who has a choice place in the rock garden—perhaps associated with the dwarf and slower-growing Saxifrages—should try this lovely Glacier Pink. R. A. M.

A FREE-GROWING ANEMONE.

(*A. BLANDA SCYTHINICA*.)

FOR those who cannot obtain, or retain when obtained, *Ranunculus anemonoides*, there is an excellent substitute in this *Anemone*, for it is cheap to buy, easily grown, and in its satiny white purity of full expansion very much like the more difficult plant. But

when closed it shows its true nature, for the backs of the sepals are deep blue, as in the typical *A. blanda*, instead of flushed with rose as in the *Ranunculus*. Perhaps it is most beautiful when half expanded in the early morning, so that while the clear white interior is visible, the sapphire blue reverse is in evidence also. A free seeder, it soon spreads about in the rock garden or sunny border, and seems to come much more truly from seed than one would expect of such a bicolor variety. In fact, I have a belief—not founded on experience, however, for I have never grown it in an isolated position—that if it were not near the ordinary blue form, the seedlings would all be of



THE DWARF GLACIER PINK (*DIANTHUS NEGLECTUS*).

Show at Royal Horticultural Society's Hall, Westminster (two days). Wolverhampton Floral Fête (three days). Royal Scottish Arboreal Society's Exhibition at Cupar (four days).

July 10.—Torquay Sweet Pea Show. Hereford Rose Show. Elstree Flower Show. Bath Rose Show (two days). Beckenham Flower Show. East Anglian Horticultural Society's Meeting. Reigate Flower Show.

July 11.—Helensburgh Rose Show. West of Scotland Rose Show. Aylesbury Flower Show.

July 13.—Woking Sweet Pea Show. Purley Rose Show.

the variety *scythica*. It is best to purchase and plant these tuberous *Anemones* as early as possible in late summer or early autumn, and, that done, to leave them alone and see that the young seedlings are not hoed off for the sake of tidiness, that bane of happy, well-meaning young seedlings in so many gardens. E. A. BOWLES.

TREES AND SHRUBS.

FABIANA IMBRICATA.

AS 1866 and 1912 will always be remembered by horticulturists and botanists, so will 1851 and 1886 be always remembered, that of the former year as the first International Exhibition, and the latter date as that of the Colonial and Indian Exhibition at South Kensington. At both of these exhibitions, as well as at the intermediate ones, vegetable

in almost any soil, and is said to be readily increased by cuttings. I am induced to draw attention to this plant because of its success in my garden, as well as for its economic uses. About three years ago I planted one which at the time was about a foot or fourteen inches high; it has now grown to about six feet, with long, pendent, Heath-like branches crowded with small leaves and pure white flowers, which began to open at the end of April, lasting till the first week in June. The position is in front of a low wall and faces west; consequently it is protected from the east, as well as partially from the north and south. It is perfectly hardy here, and never has any artificial protection. JOHN R. JACKSON.

Claremont, Lymington, Devon.

THE QUINCES.

ALTHOUGH Quince fruits are used to some extent for culinary purposes and the seeds are made use of by pharmacists on account of their mucilaginous

Cydonia japonica is also widely planted throughout the country, and is very popular for wall culture. The other three kinds are less generally grown.

Description of Species.

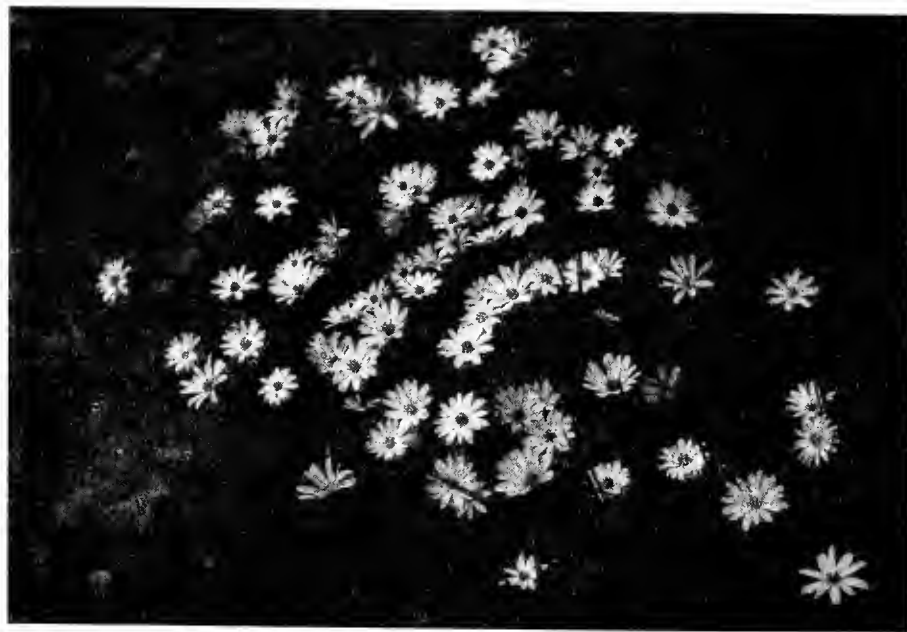
Cydonia cathayensis, a Chinese species, is rarely met with in this country. One of the best examples belongs to Canon Ellacombe, and is to be seen in his famous garden at Bitton Vicarage. A strong-growing bush, it may be recognised by its spiny branches, dark green leaves 4 inches or 5 inches long, and pink and white flowers, which are $1\frac{1}{2}$ inches across. The fruits are bright green, 3 inches to 4 inches long and 2 inches in diameter.

C. japonica, the well-known Japanese Quince, is popular in the North of England for planting against cottage walls, where it is often known by no other name than "Japonica." In the South it forms a large bush in the open ground and flowers profusely. A very large example existed a few years ago in the at one time famous Wimbledon House Gardens. This specimen must have been upwards of twelve feet high and twenty feet through, and it always blossomed well. The most familiar colour of the flowers is bright red, but there are forms with dark red, white, striped, pink and yellowish blossoms. Candicans, white; Inteo-viridis, greenish yellow; cardinalis, deep red; princeps, red; sinica, deep crimson; and sulphurea perfecta, yellowish, are among the best. Although the greenish yellow fruits are usually thrown away when they fall, they may be made use of in a similar way to the fruits of the common Quince. The fact that *Cydonia japonica* forms a good hedge plant in some places does not appear to be generally recognised, but where an out-of-the-way hedge plant is required, many worse things might be selected.

C. Maulei.—This is another Japanese species which differs from the last-named by its dwarfer habit, rather smaller flowers and golden, fragrant fruit. Mature plants are rarely more than $2\frac{1}{2}$ feet high and $3\frac{1}{2}$ feet through. They are made up of numerous thin branches, on which the brick red flowers are borne with the greatest freedom. The fruits are deliciously fragrant, and are said to be the best of all the Quinces for making into jelly. The variety *alba* has whitish flowers, and the flowers of *atrosanguinea* and *superba* are of a rich, deep red hue. The last two varieties are specially worthy of note. *C. Maulei* is very hardy, and thrives as a bush in the North of England. It rarely fails to produce a profusion of blossoms.

C. sinensis is sometimes called the Chinese Quince. It is the most tender of all the kinds, and requires wall culture in most parts of the country. Growing into a large bush or small tree, it is identified by its large, oval leaves and solitary pink flowers, which are about one and a-half inches across. The fruits are very large, oval, and yellowish in colour. Good specimens may be 5 inches to 6 inches long and 3 inches to 4 inches in diameter.

C. vulgaris is too well known to require more than passing notice. Two well-marked kinds are found, one which bears Apple-shaped fruits and the other Pear-shaped fruits. In other respects the trees are identical. The fruits are very fragrant when ripe, and are used for flavouring purposes and for making into jelly. The native country to which the tree belongs is not known, but it is widely cultivated through Europe and other places. D.



ANEMONE BLANDA SCYTHICA. A DELIGHTFUL PLANT FOR ROCK GARDEN OR SUNNY BORDER.

products formed a considerable portion of the exhibits, and at their close went far towards the enrichment of the museums at Kew. It was in 1886 that *Fabiana imbricata* was introduced to notice in this country as a medicinal plant under the name of "Piche," the leaves having the reputation of possessing diuretic properties, and being useful in kidney affections, sciatica, rheumatic neuralgia and lumbago.

As is well known, the plant is a native of Chili, Peru and the Argentine, and belongs to the Natural Order Solanaceæ, though from general appearance an ordinary observer would classify it with the Heaths (*Erica*). Considering that it was introduced to cultivation in this country so long ago as 1838, it is somewhat strange that one does not see it in gardens more frequently. Its spikes of pure white funnel-like flowers, borne in great profusion, together with the early season of flowering and the length of time it keeps in flower, are all strong recommendations for its more general cultivation, besides which the plant grows

properties, the various kinds cannot be considered of sufficient importance to include among valuable fruiting plants. Fortunately, however, they have an asset which warrants them a prominent position in the garden; therefore they are planted for this reason, and the fruit comes in as an extra product. The asset to which allusion is made is their free-flowering qualities and showy flowers, this being especially noticeable with the bush kinds. Altogether five species may be obtained. These are known under the generic name of *Cydonia*, although some people prefer to follow Linnæus and include them in the *Pyrus* family.

The cultivation of the Quinces offers no difficulties, except in the case of one species, which is not sufficiently hardy for outdoor culture in some parts of the South of England, and has to be provided with a position against a warm wall. The common Quince has been included in orchards in this country from an early date, and is well known as a small, round-headed Apple-like tree.

VIBURNUM PLICATUM.

FEW, if any, readers of THE GARDEN will dispute the assertion that this Japanese shrub is one of the six best deciduous flowering shrubs cultivated in our gardens. By botanists *V. plicatum* is classed as a form or variety of *V. tomentosum*, of which it is said to be the sterile form, though for garden purposes the two shrubs are quite distinct. The average height is from 4 feet to 6 feet or more. In most gardens it is quite hardy, though in the extreme North the protection of a wall is sometimes found desirable, while even in other parts it is worth attention, should wall space be ample, as it is such a delightful subject when in bloom. The flowering season is late May and early June, when the white clusters of flowers almost hide the foliage. These trusses or clusters are about three inches across, in shape resembling a slightly flattened ball. Perhaps the best effect is obtained by massing *Viburnum plicatum* along the front of a fairly wide shrubby border, or in a large bed with a background of tall shrubs or trees a short distance away. This and other members of the *Viburnum* family delight in a fairly rich loamy soil with no lack of moisture at the root.

A. O.

FLOWER GARDEN.

SWEET PEA NOTES.

The Great Show.—On Tuesday and Wednesday of next week, the ninth and tenth days of the month, the National Sweet Pea Society will hold its twelfth exhibition, and it is anticipated by the powers that be that it will be superior in all respects to any of its predecessors. It is notable that the authorities of all annual institutions such as this invariably expect to advance, and if the meeting should fall a little short in some particular aspect, an excellent reason, over which no human being could possibly have control, is immediately forthcoming. This is just as it should be, since optimism is essential to success. The prospects of the show are indisputably good, and it is safe to prophesy that thousands of superb flowers will be exhibited, and that the competition in most of the classes will be keen. Let us hope that the tendency to coarseness which has crept into some of the exhibits in recent years will be conspicuous by its absence, and that if there are any such flowers shown, the judges will be down upon them like the proverbial "cartload of bricks." There was some coarseness at the "International," but it did not assist the exhibitors in the smallest degree, for the simple reason that the judges chosen for that great occasion were all for the perfect Sweet Pea.

Provincial Shows.—At all the horticultural gatherings in the provinces at the present time Sweet Peas play a part of considerable importance, and classes for them are numerous and have handsome trophies and valuable money prizes

allocated to them. Visitors to these shows look eagerly for the Sweet Peas, and criticise flowers with a keenness which proves conclusively the hold the flower now has on the public mind. Even at the smallest shows, designed and maintained practically for the cottage growers, classes are provided for the Queen of Annuals, and invariably the competition is strong, though in many instances the blooms do not attain to the standard of a "National." However, the interest is there, and the quality will undoubtedly steadily improve.

Watering.—In most gardens the plants will now demand immense supplies of water; but the fact must never be overlooked that it is easily

admirably grown that they possess the power to respond when called upon in this way.

Feeding.—Amateurs, generally speaking, require no encouragement to feed their plants; on the contrary, one often experiences the utmost difficulty in persuading them that it is exceedingly easy to overdo it. It is no uncommon thing to find a man who is convinced that manure is of infinitely more importance than cultivation, and that it is the simplest thing in the world to make a magnificent plant out of a wretchedly-grown apology by the use of special foods. Never were there greater errors. Those who would have the finest Sweet Peas must rely mainly upon mechanical cultivation of the soil. That feeding will restore a

plant from bad to good health, or make a weakling into a strong and handsome giant, is equally fallacious, and the sooner the facts are universally accepted, the earlier we shall see Sweet Peas splendidly grown in every garden in the country. By all means feed with a variety of suitable foods, but before doing so establish such a foundation as will ensure their perfect assimilation. Whatever is given must be on the weak side, and it must always be applied when the ground is pleasantly moist. These things have been said before, but they will bear repetition. HORACE J. WRIGHT.

NOTES ON THE POET'S NARCISSUS.

JUDGING from letters I sometimes receive, there is a growing feeling among those who are most interested in this section of the *Narcissus* family that a great many—too many—varieties are now on the market, and that not a few are so similar to one another that they ought to be bracketed together as "too-much-alike" varieties, as is done in the case of the Sweet Pea. I sympathise very much with my correspondents. Poets as we have them to-day are bewildering, and to be able to select the best for the purposes of the show-table and the best for the purposes of a garden is a task very much beyond my powers. I used to think the differences between florists' Tulips were hard to detect; but I am now beginning to think that it is child's play to differentiate a Mabel from a Mrs. Collier compared with what it is to tell a Comus from a Spencer, and similarly with many others. I do not think I would have any difficulty if I went through my note-books of the past few years to make out a list of at least a hundred varieties; and as I think of this I wonder how many of them our greatest Poeticus experts could name correctly. I am asked to make a selection of some of the best, and also to say which have all-red eyes and which are "rimmed." To answer this last question first, I append a list of a certain number of the best known, and I have divided them into three groups—(1) the all-red solid eye, (2) the suffused red eye and (3) the rimmed eye. With but one or two exceptions the classification is the



A PROFUSELY-FLOWERED BUSH OF *VIBURNUM TOMENTOSUM* *PLICATUM*.

possible to give too much, and thus do far more harm than good. Efficient mulchings reduce the necessity for watering, and if material suitable for the purpose is not at command, the soil itself should be made to serve by incessant shallow hoeing. The hard water which most of us are forced to use is best poured into grips running down each side of the lines, these being filled as many times as may be deemed necessary or desirable. Occasional vigorous hosings during the evening will still do decided good, especially when they are given after intensely hot, sunny days or when a drying wind has been blowing. The length and strength of the stems improve with this treatment, provided, of course, that the plants have been so

result of my own observation, and it is not based on catalogue descriptions. The first group contains The Bride, Chaucer, Lyceidas, Bard of Avon, Dresden, Acme, Poetarum and Sidney; the second, Muriel, Kestrel, Socrates, Virgil, Ovid, Epic, Ibis, Laura, St. George, Mougli, Biarritz and Horace; the third, Laureate, Walt Whitman, Mistress Prue, White Standard, Comus, Kingsley, Symphony, George Herbert, Tom Hood, Millie Price, Homer, Lullaby, Rhymster, Oliver Goldsmith, Dante, Rudyard Kipling, Jack Point, Carol, Hildegarde, Tennyson, Sonata, Coronation, Herrick, Cæsar, Almira, Ben Jonson, Minerva, John Ruskin, White Elephant, Timon, Sarchedon, Matthew Arnold, Glory and Cassandra. Out of all these, which are the best? I cannot, I fear, offer a selection; I can only say that I like the following very much indeed, and I would not like to be without them: Cassandra, Horace, Kestrel, Kingsley, Acme, Comus, Tom Hood and Virgil. My own practice is to grow a good many varieties, and then at show-time cut those which are in condition. Different years suit different varieties, and, again, an early or a late season makes a great difference in what will be at their best about the date of the exhibition. Hence this should be provided for. Lastly, before purchasing one should find out which are early and which are late. There will be quite a week or ten days' difference in the times of Chaucer and Hildegarde opening. This latter, by the way, I would certainly include in my list if I wanted a late one and was prepared to pay £5 for it. There are others I would add if money was no object and if they were in commerce, such as Sarchedon, Socrates and Snow King. JOSEPH JACOB.

SWEET PEA MRS. ANDREW IRELAND.

[See Coloured Cover.]

THERE are some few people who grow Sweet Peas exclusively for exhibition, still more who cultivate them for exhibition and garden adornment, and many thousands who have them for the latter purpose alone. It is a general idea that Sweet Peas are all much of a muchness, and that a variety suitable for show purposes is equally good for the garden. This, however, is not invariably the case. When a variety is seen on every stand and ranks with the best in vigour, strength of constitution and floriferousness, it must be watched, and it will assuredly be grown. Of such as these is Mrs. Andrew Ireland. I should unhesitatingly include it among the three foremost varieties for gardens. When one visits a trial of a hundred or more Sweet Peas, Mrs. Andrew Ireland will be conspicuous from wherever one stands, for its beautiful bicolor blooms literally smother the plants. On stands that show it may not be absolutely indispensable, but it lends that variety and helps other colours in a manner which make it exceedingly valuable.

H. J. W.

THE WHITE GERMAN CATCHFLY. (LYCHNIS VISCARIA ALBA.)

THE ordinary form of the German Catchfly, with rose-coloured flowers, is a native of various parts of Europe, and is a comparatively rare plant in this country. For several years past gardeners have been delighted with the double form known as *Lychnis Viscaria splendens*, which is undoubtedly the finest garden plant of the group. The white variety now under notice is, however, very lovely when compared with the others. White varieties are usually looked upon as somewhat inferior to the types, but when planted in close proximity to them they are seen under the best conditions. This, then, I consider is the proper and right way



A FINE GROUP OF THE NOBLE EREMURI.

of using a white variety—by placing it alongside some of the dark forms, whether they are single or double. Another excellent way of showing it to advantage is to plant a large clump, group, or bed to form a large mass.

As a garden plant it is undoubtedly most at home in the rock garden, on account of its dwarf habit and short leaves, which are likely to get injured if planted in the ordinary herbaceous border when digging-time arrives. The stems generally grow from 9 inches to 12 inches high, and flowering, as it usually does, at the end of May and the beginning of June, the plant can be looked upon for early summer effect. Among the rocks a naturally-drained soil is almost certain, and the plant will be

happy in this position during the winter. It is perfectly hardy, although sometimes it will suffer during the dull months in the neighbourhood of large and smoky towns owing to the sooty deposit on the foliage, which holds the wet and filth brought down by rains. A good plantsman can get as many plants as he wishes by carefully lifting a large clump and separating each crown with a portion of root if possible. In most cases, however, each crown would have a few roots attached if carefully separated by hand and knife occasionally to make sure of separating the crowns without breaking them. These young pieces should be potted up in the spring. After the plants have ceased flowering they can be put separately into small pots and potted on into larger ones as soon as they are rooted to encourage the crowns to make good flowering clumps for another year. The very small plants may be wintered in a cold frame; this will prevent slugs from destroying them before the growth commences in spring. A. C.

THE EREMURI.

THESE plants constitute a group of the noblest hardy herbaceous perennials, which, by reason of their imposing grandeur, are absolutely unique. They belong to the Lily Order, and come to our gardens from Northern India, Persia, Central Asia and other like parts; hence they are entirely fitted for cultivation in these islands. Hitherto the plants have been grown more or less as isolated examples, though at the present time there are not wanting evidences of that type of grouping which is calculated to display them to much better advantage. In all probability, perhaps the most effective way of dealing with the plants would be to provide them with a thin groundwork of shrubs, from which in early summer the giant inflorescences might issue. In this way these Eremuri would receive protection in spring for the leaves and the then coming spike of flowers. In any companionship of this kind, however, care should be exercised that the noble group we have in mind should have ample space, owing to the nearly horizontal spread or radiating character of their roots. Culturally, at the present time every attention should be given to water-

ing and to liquid manure to encourage the formation of crowns, on which the good flowering another year so much depends. During the past few weeks, both at the great International Show at Chelsea and at Vincent Square, visitors have had an opportunity of seeing these Eremuri in great numbers, though more particularly the forms of *E. robustus*, *E. himalaicus* and *E. Warei*, which are bluish pink, white, and pale orange flowered respectively. The first two named appear in the above illustration, the former, attaining occasionally a height of 10 feet or 12 feet. At a more seasonable time for planting I hope to deal with the group in fuller detail. E. H. JENKINS.

ROYAL HORTICULTURAL SOCIETY'S SUMMER SHOW.

AFTER a lapse of two years, this important exhibition was once again held in the beautiful and spacious grounds of Holland House, Kensington, on Tuesday, Wednesday and Thursday last.

The show proved to be a great success, and the quality of the exhibits has never been excelled. Hardy plants and alpiners were the outstanding features. The water and rock gardens, arranged in different styles, were tastefully designed and carried out. Sweet Peas, Roses, Carnations, pot fruits, Orchids and Ferns were alike well represented. To the Rev. W. Wilks (secretary of the society), Mr. S. T. Wright (superintendent of the show), Mr. Frank Reader and Mr. Plowman we tender our thanks for services freely rendered in enabling us to report this admirable show. Unfortunately, the weather was threatening on the morning of the opening day, rain falling for the greater part of the afternoon.

HARDY PLANTS AND ALPINES.

These were as numerous and as effectively displayed as ever, and in some instances a few plants—notably the Eremuri, which under canvas do not give of the best of their good attributes—were not seen so well as in the open, the majority, because of the coolness and sombreness of the day, were not only seen to good advantage, but were capable of being viewed in comfort.

In No. 1 Tent, Messrs. Wallace and Co., Colchester, had one of their well-known characteristic groups, an arrangement of an Old English terrace and wall and water garden, adapted to modern times. Of its kind it was both ideal and convincing, without many of the extravagances of the exhibition arena—just that kind of thing that any good garden might reasonably contain. The flower-border portion, viewed from the upper terrace, as it were, was particularly effective and good, the height of a yard or more assisting the display materially. In this were seen masses of such Eremuri as Sir Michael, Olga, Shelford, Bungei and such distinctive hybrids of E. Olga as Peach Blossom and Rosy Morn, both of which are exceedingly delicate in colour. *Lilium myriophyllum*, Jenny Hanson Poppy, *Lychnis chalconica*, *Lilium auratum rubrovittatum*, with the "Gem" class of Pentstemons, were among important groups. A further feature was the raised terrace garden, below which came a bordering of Ferns in apparent shade, while again beyond this was seen a quiet, restfully-disposed water garden, grassed to the water's edge, and associated with all that was best and most agreeable with this phase of gardening. Hence it will be seen that the exhibit was of embracing character—indeed, a series—into which many phases entered, the whole being well conceived and perfectly carried out. The Japanese Irises and Astilbes at the margin were arranged in particularly fine groups, and were singularly good and effective. As the outcome of three days' work the result was excellent.

Messrs. W. Cutbush and Sons, Highgate, N., arranged a rather sumptuous group, the central

feature of which was a water garden rendered conspicuous by a free planting of Water Lilies and superb colonies of *Iris lævigata*. Phoriums and Astilbes occupied notable positions, while such things as *Lilium superbum*, *Thalictrum dipterocarpum*, *Darlingtonia*, *Sarracenia* and the like appeared in suitable places. In and around were arranged groups of early Gladioli, *Lilium giganteum*, *Meconopsis Wallichii* and other good and notable plants. The group was in excellent taste and well finished off.

Mr. Maurice Prichard, Christchurch, had a delightfully conceived and arranged rock garden, albeit the newness of the Purbeck limestone employed was rather opposed to complete success. Such things, however, are more or less inseparable from the exhibition tent, and in this instance were quite overshadowed by the great variety of plants introduced, by their choiceness and, not least, by the deftness and neatness of their colonised arrangement. In this way were seen delightful groups of *Hypericum empetrifolium*, *Campanulas pulla* and *puloides*, *Ruta patavina* (yellow), *Cytisus schipkaensis*, *Ranunculus bilobus*, *Ourisia coccinea*, *Wahlenbergia vincaeflora* and the lovely red and crimson single-flowered *Dianthus E. T. Anderton*. Either side of the rock garden was flanked by bolder herbaceous things, a conspicuous group being formed of *Lavatera* (*Malva*) *Olbia*, whose pink flowers, 3 inches across, are a great charm. Great flowering branches of *Coriaria japonica* displayed this most effective shrub to advantage. It is one of the most ornamental plants we know.

Messrs. George Jackman and Son, Woking, had an extensive grouping of the best herbaceous things, Lilies, Delphiniums, *Verbascums*, *Gaillardias*, *Geums*, *Phloxes* and the like all entering freely into a particularly fine display.

Messrs. Russell, Earl's Court Road, W., arranged rockwork outside No. 1 Tent with succulent and hardy plants generally.

In the open Messrs. Carter and Co., Raynes Park, arranged a Japanese garden, the great feature of which were the magnificent groups of *Iris lævigata*, which were everywhere in the greatest profusion. In colours of white, rose, purple, violet and many other shades, the plants were fascinating in the extreme, while around were Lilies, Bamboos, Acers and shrubs, *Funkias* and the like, everything everywhere Japanese to be in keeping with the general idea of the arrangement. The water portion was most effectively and naturally done, and, without obtrusiveness, constituted a most enjoyable whole.

Mr. G. Reuthe, Keston, Kent, arranged a rockwork exhibit on tabling, on which were seen many interesting alpine and other plants. *Acantholimon venustum*, *Abelia floribunda*, *Silene acaulis alba*, *Gypsophila prostrata rosea*, *Campanula raddeana*, *Saxifraga cochlearis*, *Epilobium obcordatum*, *Sedum sulphureum*, *Allium pedemontanum*, *Geranium Lowii*, *Patrinia palmata* (with yellow flowers) and *Campanula mirabilis* were among the more delightful things. A fine specimen of *Desfontainea spinosa* was also noted.

Messrs. Piper and Sons, Barnes, had a capital rockwork arrangement in conjunction with water

and Japanese Irises, the whole being well arranged with many suitable groups of plants.

Messrs. John Forbes, Hawick, Limited, had a remarkably good display of *Violas*, *Pentstemons*, *Pyrethrums* and *Phloxes* in the open, each group in its way containing a large number of good varieties. The *Phloxes* were particularly good, and of these we noted *Tapis Blanc*, *Bella Forbes* (pink) and *Mrs. Oliver* (pink and white). The *Pentstemons* were superb: we have never before, indeed, seen such excellence of culture or size of flowers as these contained in any Holland Park Show. *Thomas Hay* (scarlet and white), *Lady Love* (pure white), *Marquis of Linlithgow* (purple and white, very charming) and *Mrs. Mitchie* (scarlet and white throat) were among the best in a really grand lot.

Mr. Clarence Elliott, Stevenage, displayed on a table of rockwork some really grand masses of alpine flowers, notably the fine blue *Campanula Miss Willmott*, which is perhaps one of the best of recent additions to these plants. It was a most effective picture in a setting which included *C. pulloides*, *Oxalis enneaphylla*, *Coronilla Cappadocia* (yellow) and some others.

Messrs. Barr and Sons, Covent Garden, W.C., had a most effective grouping of *Phloxes*, alpiners, English Irises and other good herbaceous subjects. *Salvia virgata nemorosa* (in purple and red) was singularly striking and good, a great gain effectively when seen in a mass as exhibited. It is almost unique. *Larkspurs*, *Lilium candidum*, *Campanula pusilla* (in wonderful array) and many annuals added greatly to the charm of the group as a whole. In the centre of the group was seen a prettily-conceived rock garden suitably and agreeably planted on all sides. *Campanula Hendersonii* was quite a striking plant, and is rarely seen in such excellence. The group, which included a choice lot of Japanese dwarfed trees, extended throughout the entire side of Tent No. 3.

On two sides of Tent No. 4 Messrs. George Bunyard and Co., Maidstone, exhibited splendid displays of hardy flowers. Lilies and Delphiniums being particularly good and in fine groups. The more conspicuous were *Alake*, *Queen Mary* (blue and white), *Rev. E. Lascelles* (the glory of the semi-doubles) and *Primrose*. The *Double White Rocket*, *Pentstemon Southgate Gem* and a series of the new *Astilbes Venus*, *Ceres* and *Rose Pearl* were quite good.

Mr. Howard H. Crane, Highgate, N., had some eighty or more pans of *Violas* delightfully arranged, showing to advantage these most precious of hardy bedding flowers. *Moseley Perfection* (yellow), *Royal Sovereign*, *Lady Knox* (primrose), *J. B. Riding* (rosy red), *Maggie Mott* and *Hugh Reid* (a fancy sort) were among the best in a really superb gathering. Some charming vases of the more miniature-growing *Violettas* were also noted.

Messrs. W. and J. Brown, Stamford, exhibited fine masses of *Gaillardias*, in which the self yellow *Lady Rolleston* found a place. *Thalictrum Delavayi* and *Ostrowskia magnifica* were also noteworthy and uncommon.

Messrs. R. H. Bath, Limited, Wisbech, had a rich display of *Delphiniums*, *Tribouia* (metallic

blue and mauve), Lord Charles Beresford (deep blue, white centre), Perle Bleu (semi-double, very distinct), and King of Delphiniums being among the finer sorts. Superb vases of Carnations were also seen in plenty.

Messrs. G. Bolton and Sons, Buntingford, Herts, had a mixed group of hardy flowers which contained *Campanula luteosa*, presumably a semi-double variety of *C. persicifolia*.

Messrs. Carter Page and Co., London Wall, showed a remarkable assortment of *Violas* in pans, some 300 of these making a really grand show. Bronze King, Redbraes Yellow, Purple Bedder, J. B. Riding and Virgin White were very beautiful.

Mr. G. Reuthe, Keston, Kent, displayed in No. 10 Tent a showy lot of hardy herbaceous plants, with flowering shrubs and alpinas, Lilies, Larkspurs and the more seasonable flowers being arranged in plenty.

Messrs. G. Mallett and Co., Cheddar, arranged a group of herbaceous things, in which the dominant features were *Lilium candidum*, *Salvia nemorosa virgata* and *Phlox omniflora* Snowden, a most effective variety of the early-flowering race. *Stachys grandiflora* was likewise a notable plant, good and distinct.

Early *Gladioli* and *Sparaxis* were the chief features of an exhibit from Messrs. Lilley, Guernsey, the group being most attractively arranged with Grasses. *Brodiaea laxa* in rich violet was also very beautiful.

Messrs. Paul and Son, Old Nurseries, Cheshunt, arranged a group of Phloxes, Heucheras, *Alstroemerias*, *Campanulas* and other good hardy flowers of the moment.

Mr. B. Ladhams, Southampton, had a remarkable display of *Gaillardias*, Superb and Sulphur Gem being perhaps the more conspicuous and distinct. *Salvia superba* (*S. turkestanica* × *S. Selarea*) is a most handsome plant. Pinks, too, were very charming and beautiful. The mass of *Scabiosa caucasica* was very fine.

Messrs. Robert Veitch and Co., Exeter, had some exceptional things in *Lonicera Hildebrandtii*, *Abutilon vitifolium album*, *Cyrilla racemiflora*, *Plagiatanbus Lyallii*, *Destontainia spinosa* and the rarely-seen *Notospartium Carmichaeliæ*, whose rose-coloured flowers on Rush-like stems are most charming.

Mr. Leslie Greening, Richmond Hill, exhibited a small rock garden with pool.

Hardy hybrid Phloxes, raised between *P. canadensis* and *P. decussata*, were shown by M. G. Arends, Ronsdorf; an interesting gap-filling race in which there are future possibilities.

A rock garden in red sandstone, arranged with Ferns and alpinas, came from Messrs. Fells and Sons, Hitchin, Herts. *Primulas* and *Thymes* were very charming.

Messrs. Gunn and Son, Birmingham, arranged basket groups of their *Viola cornuta* forms, such as alba, purpurea, and Lilac Queen. Some fine stems of *Lilium auratum* were well shown.

Messrs. Whitelegg and Page, Chislehurst, displayed an extensive group of hardy things, *Gladioli*, Larkspurs, Water Lilies, *Geums*, *Heucheras* and other showy plants.

Mr. James Box, Lindfield, arranged a particularly showy group of *Eremuri*, *Inula royleana*, *Cimicifuga racemosa*, English Irises, *Delphiniums*, the early *Gladioli*, Phloxes, *Sidalcea Listeri* and other plants.

Messrs. G. and A. Clark, Limited, Dover, had a particularly fine group of things—*Pyrethrums*,

Salvias, *Alstroemerias*, *Lilium candidum* (very fine) and the lovely *Gilia coronopifolia*, whose scarlet spikes were very fine. *Eremuri*, *Centaurea ruthenica*, *Origanum*, *Dictamnus* and *Delphiniums* were also good.

Messrs. Phillips and Taylor, Braeknell, Berks, had a variety of hardy plants associated with a Lily pond and fine banks of *Delphiniums* and other plants.

An exhibit of *Delphiniums* of considerable extent, if quite devoid of artistic merit, was arranged by Messrs. Kelway and Son, Langport, quite a large number of varieties in moderately-grown spikes being well displayed.

Mr. Reginald Prichard, West Moors, Wimborne, had a most interesting lot of things, chiefly alpinas, of which *Pentstemon White Newbury Gem*, *Saxifraga diversifolia*, *Wahlenbergia vineiflora*, *W. saxicola*, *Dianthus Jubatus* and *Pentstemon Californian Blue Gem* were a few.

Messrs. W. Godfrey and Son, Exmouth, Devon, had a sumptuous group of *Canterbury Bells*, the great cup-and-saucer flowers in blue, pink and white defying description; an admirable display of an easily-grown and popular plant.

Mr. Amos Perry, Hardy Plant Farms, Enfield, displayed a lovely lot of *Delphiniums*, gorgeous banks of blue, violet and purple in many shades. Duke of Connaught (deep blue and white), Carnegie (metallic blue and mauve), Blue Fendre, Julia, La France and Rev. E. Lascelles were among the most imposing and beautiful. In another group Mr. Perry showed massed banks of Pinks, Phloxes, Lilies, *Veronica spicata alba*, and *Bletia hyacinthina*. Hardy Ferns and Water Lilies, all delightfully displayed, occurred as an extension of a group overwhelming in fascination, in beauty and in grace. *Lavandula nana atropurpurea* and L. Miss Jekyll's variety were also good. *Dianthus Painted Lady* and *Prunella webbiana rosea* were charming plants in this group. The exhibit from Mr. Perry occupied upwards of two thousand five hundred square feet, and contained many plants of merit.

A great and glorious bank of Phloxes came from Messrs. Gunn and Sons, Birmingham, the rich masses of colour absolutely defying description. Baron von Dedem (scarlet), Elizabeth Campbell (pink), Flora (pink and white), Le Mahdi (deepest violet) and George A. Stroehlein (scarlet) were grand. One of the finest displays of Phloxes ever seen.

MISCELLANEOUS STOVE AND GREENHOUSE PLANTS.

A very charming group of flowering plants was set up by Messrs. W. Cutbush and Sons, Highgate, London, N. *Polyantha Roses*, such as Eileen Low, Orleans Rose, Jessie, Mme. Norbert Levavasseur and several other good things were beautifully grouped. Very striking were the Carnations in this display. Lady Coventry (rich and striking), Lord Rothschild, Queen Mary, White Perfection and King Arthur were all noteworthy. Crotons, Palms and Ferns added very materially to the effect of this group.

"Magnificent" aptly describes the gorgeous group of stove and greenhouse plants arranged by Messrs. J. Veitch and Sons, Limited, Chelsea, S.W. This group embraced grand examples of Crotons and other choice foliage plants, and in conjunction with flowering subjects, such as Orchids in variety, *Solanum Wendlandii*, *Cannas*, *Clianthus Dampieri* and *Santpaulia ionantha*, made a really magnificent display. Of the foliage plants worthy of mention,

the following were of a high order of merit: *Anthurium Hookeriæ*, *Polypodium glaucum crispum*, *Araucaria Silver Star*, *Cyanophyllum magnificum*, *Croton Resplendent*, *C. Thomsonii*, *C. B. Comte*, *C. Flamingo* and *Alocasia argyrea*.

Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton, had a superb group of Ferns, in which there were many superb specimen plants. This group was so large and comprehensive that it occupied one-half of the centre of the Large Tent and faced all round. Noteworthy examples were *Platyceerium Veitchii*, *Lomaria gibba*, *Gleichenia Mendelii*, *Nephrolepis exaltata superba*, *Davallia Fijiensis robusta*, *Polypodium Knightæ*, *Nephrolepis Marshallii compacta*, and an immense array of beautiful plants the majority of which deserve mention. The disposition of the various subjects in this group was very good.

A superb exhibit of Ferns was staged by Messrs. H. B. May and Sons, The Nurseries, Upper Edmonton. The grouping in this case was charmingly carried out, and the effect was distinctly artistic and pleasing. *Adiantum farleyense gloriosum*, *Polypodium Knightæ*, *Lastrea patens variety Mayii*, the dainty little *Nothochloena rufo* and *Gymnogramma schizophylla superba* were among a host of most beautiful things that should please the Fern-lover.

A pretty group of *Araucaria Silver Star* was shown from Messrs. Thomas Rochford and Sons, Turnford Hall Nurseries, Broxbourne, Herts. This is a charming acquisition, and should be much valued by those who use this subject for conservatory embellishment.

A group of foliage plants from Mr. W. A. Manda, South Orange, New Jersey, U.S.A., and St. Albans, Herts, had a few choice plants staged therein; a notable example was *Polypodium mandaianum*, which received a first-class certificate. This is a beautiful plant, and was exhibited in splendid condition.

Zonal *Pelargoniums* in wondrous variety were shown in handsome bunches by Messrs. Carter Page and Co., London Wall, E.C. The colours were vivid and striking, and the individual pips very large. George Cooke, Andrew Lang, Mrs. Brown-Potter, Dublin and Princess of Wales were all striking.

Mr. H. J. Jones's Nurseries, Limited, Lewisham, S.E., set up one of their famous groups of Zonal *Pelargoniums* growing in pots. We have never seen anything to equal this fine exhibit of *Geraniums*, as the quality throughout was so good. Many seedlings from Paul Crampel were in evidence, and this gives a very good indication of their worth. St. Louis, H. J. Jones, Alf Simpson, Mrs. Tom White, Carmania, Will E. Newman and Freddie were noteworthy. A capital collection of Ivy-leaved *Pelargoniums* was also shown, embracing such sorts as Her Majesty, Mr. Hawley Gallilee and others.

Double-flowered *Begonias* were well shown, as usual, by Messrs. Blackmore and Langdon, Twerton-on-Avon, Bath. Exquisite aptly describes the quality and beauty of these flowers. The plants were in grand condition, carrying really wonderful blooms. Mrs. Robert Morton (amber), Florence Nightingale (white), William Marshall (brilliant crimson), Irene Tambling (orange) and Miss Ethel Gill (pink) were all magnificent.

Caladiums from Messrs. John Peed and Son, West Norwood, S.E., made an interesting exhibit, although not so large in extent as usual. The grouping left nothing to be desired, and was quite pleasing. Sir Henry Irving, W. E. Gladstone, Triomphe de Combe, King George, Mikado, Lady

Stafford Northcote and Oriflamme were conspicuous, and were a welcome piece of colouring.

Messrs. J. Carter and Co., Raynes Park, S.W., staged a pretty table group of Begonias, Streptocarpus and the primrose-coloured Calla, edged with Adiantums and Panicum variegatum. The effect was pleasing. The Begonias were very good, double-flowered sorts alone being represented. The Streptocarpi were pleasingly diverse in their colourings and markings.

Fuchsias from Messrs. Piper were a somewhat unusual exhibit at these shows. Specimen plants made an excellent background, with standard Fuchsias rising out of a groundwork of small in considerable variety. This exhibit recalled the days when the Fuchsias were so popular. The group was generally regarded as a distinctly good one.

A nice group of stove and greenhouse plants came from Mr. J. Bruckhaus, Twickenham, in which Caladiums, Crotons and Palms were chiefly conspicuous.

A small table group of show and fancy Pelargoniums was staged by Mr. W. Treseder, Cardiff. Lord Bute, Lady Bute, Flora and several others were exhibited.

In a group of plants set up by Messrs. Whitelegg and Page, Chislehurst, Kent, there was a mound of Salmon Paul Crampel Zonal Pelargoniums, which merited attention.

Choice stove and greenhouse plants were displayed in a table group by Mr. L. R. Russell, Richmond, Surrey. Here were to be seen pretty examples of Alocasia, Caladiums, Dracaenas, Anthuriums and many choice subjects too numerous to mention. The grouping was well done considering the circumscribed area.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, staged a table group of such subjects as the Bottle-Brush Tree, Gerberas, Hydrangeas, Ericas, Pelargoniums, and the new Arancaria Silver Star.

Messrs. H. Cannell and Son, Swanley, Kent, made a grand show. In their group they had represented splendid banks of Cannas, double Begonias, Gloxinias, Zonal and Ivy Pelargoniums, backed by numerous specimens of American Pillar Rose. The Cannas were rich and glorious in their hues, the Begonias of a high order of merit, and the new Salmon Paul Crampel Zonal Pelargonium was grand. Rosebud is a pretty double Begonia.

Mary Countess of Ilchester (gardener, Mr. Dixon), Holland House, had an interesting group of succulents, embracing quite a large number of varieties. There were also several very interesting Cactaceae plants.

The sweet-scented Pelargoniums as shown by the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts (gardener, Mr. E. Beckett), were a pleasing feature of this great show. Here were to be seen these noteworthy plants in almost endless variety. A few worth special mention were Pelargonium crispum maximum, P. Moore's Victory, P. ficifolium odoratum, P. Agnes, P. Purple Unique (well-flowered) and many others equally noteworthy.

ORCHIDS.

J. Gurney Fowler, Esq., Woodford, showed various Selaginellas in good style. Prominent among these were S. Braunii, S. apus (in pyramid form) and S. inaequalifolia. Interspersed among the greenery of the Selaginellas were Orchids, the most noticeable being Odontoglossum armainvillierensis xanthotes and Cattleyas.

Mr. H. A. Tracy, Lily and Orchid Nursery, Twickenham, staged a compact little group of Orchids, including Cattleyas, Odontoglossums, Pleurothallis Scapha and Cypripediums.

Messrs. Charlesworth and Co., Hayward's Heath, had a really magnificent group. Occupying a prominent position were some fine specimens of Phalaenopsis rimestadtiana. Other notable exhibits were Grammangis Ellisii and Epidendrum prismatocarpum. The pretty little Aerides japonicum, which gained its first award at the 1866 Show, and shown as a rare plant at the recent "International," was to be observed, also well-grown plants of Epidendrum vitellinum majus, Oncidioda Cybele, Brassavola digbyana, Laelio-Cattleya Ceres variety Princess Mary, Brasso-Cattleya Leemannia and many others. Oncidium clasianum was an interesting exhibit.

Messrs. Mansell and Hatcher, Limited, Rawdon, Yorkshire, staged a fine exhibit. Cattleya dupreana showed up well. Laelio-Cattleya blechleyensis variety King George and L.-C. Martinetti were very attractive. Among other fine specimens were Miltonias in variety, Cattleyas, Cypripediums, including C. chamberlainianum and C. rothschildianum, Saccolabium Blumei, Odontoglossum williamsianum and many other well-grown Orchids, staged in excellent taste.

Mr. E. V. Low, Haywards' Heath, showed Cattleya Mendelii, C. Myra Teesters and C. Mossiae reineckiana, Laelio-Cattleyas, Cypripedium l'Ansonii and Bulbophyllum Colossus.

Sir Jeremiah Colman, Gatton Park, Reigate (gardener, Mr. J. Collier), put up an interesting exhibit, including Odontoglossums, Cattleyas, Nepenthes and Miltonias. Cypripedium superbiens, Cattleya Mendelii grandiflora, Epidendrum alatum and Odontioda Bradshawia stood out prominently.

E. H. L. Davidson, Esq., Twyford (gardener, Mr. F. Cooper), showed Laelio-Cattleya Endora, L.-C. Cowanii and L.-C. canhamiana. Among others were Cattleya Mossiae Wagnerii, Cattleya thurgoodiana, Odontoglossums and Laelia tenebrosa x L.-C. canhamiana.

Mr. Harry Dixon, Spencer Park Nursery, Wandsworth Common, S.W., staged Odontoglossum Dora, O. Solon, O. laudatum and O. Fascinator. Cattleyas and Odontiodas made up the group.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, occupied a large portion of the Orchid Tent with a well-staged group. Noticeable among many other fine specimens were Cattleya thurgoodiana Apollo, C. gigas Meteor, C. reineckiana variety Snowflake, and C. Mossiae. Vivid scarlet sprays of Renanthera imschootiana hung out prominently from the group. Oncidium pulvinatum, O. flexuosum, O. Gardenii and O. crispum added to the effect of the whole. Cypripedium niveum and C. bellatulum attracted by their dwarfness. Laelio-Cattleyas, Dendrobiums, Cypripediums, Odontoglossums and Coelogynes were shown in profusion. Acineta Humboldtii, Gongora fuscolutea and Masdevallia simula were among other interesting exhibits. The tiny blooms of the latter peep out of the foliage like pheasants hiding in grass.

Messrs. James Veitch and Sons, Limited, Chelsea, showed a few Orchids in their huge general group. Cypripedium Curtisii, Cattleya Mendelii, Vanda caerulea, Oncidium leucochilum, Laelio-Cattleya Gladiator, Promenaea citrina, Odontioda Thwaitesii and Dendrobium Dearii were among the most striking. Cattleya gaskelliana, C. gigas sanderiana and Disa Luna were well-grown specimens.

ROSES.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, showed superb blooms of Mildred Grant, Liberty, Killarney, Richmond, Rayon d'Or and the Lyon Rose. The colour of the blooms and the manner of arrangement were all that could be desired.

Messrs. Frank Cant and Co., Braiswick, Colchester, were represented by a very fine collection of Roses, including Lyon Rose, White Maman Cochet and Marquise de Sinety. The single Roses Lady Curzon, Joseph Billard, Hebe's Lip and Gottfried Keller were much admired.

Messrs. William Paul and Son, Limited, Waltham Cross, had a magnificent group of Roses in baskets, interspersed with standards carrying a profusion of bloom. Among the varieties in baskets we were much impressed with Warrior, Château de Clos Vougeot and Mme. Ravary.

The delightful group from Mr. Charles Turner, Slough, was the admiration of all. In the foreground were arranged baskets of such capital varieties as Ulrich Brunner, Geoffrey Henslow (new crimson) and Viscountess Folkestone. The two new ramblers, Coronation (crimson) and Ethel (pink), were shown in grand form.

Mr. George Prince's Roses from Oxford were the acme of perfection both in colour and arrangement. In the centre of this group was a lovely stand of the new bedding Rose, Rayon d'Or, surrounded by equally good stands of Lyon Rose and Juliet, with ramblers in the background.

Messrs. George Bunyard and Co., Maidstone, showed very nice blooms of Juliet, Frau Karl Druschki and Lyon Rose in boxes, with ramblers such as American Pillar, Philadelphia Rambler, Rubin and Queen Alexandra as a background.

Messrs. W. and J. Brown, Stamford and Peterborough, had a beautiful group of fresh blooms, among which we noted Mme. Ravary, Richmond and Mme. M. Soupert.

Messrs. R. H. Bath, Limited, Wisbech, showed fine vases of Rayon d'Or, Beauté de Lyon and Marquise de Sinety, all very well coloured, in a good general collection.

Baskets of Roses were the feature of a very nicely-arranged group staged by Mr. W. Easlea, Danecroft Rosery, Eastwood, Essex. We were well impressed with two new bright little Polyantha Roses raised by the exhibitor, viz., Little Dorrit and Little Nell. The Lyon Rose, Harry Kirk, Duchess of Wellington and Arthur R. Goodwin comprised some of the choicest baskets in a remarkably good collection.

Messrs. Alex. Dickson and Sons, Limited, Hawtmark, Newtownards, County Down, had a superb collection, comprising Lady Ashtown, Lady Pirrie, Alex. Hill Gray, Mrs. Fred Straker, Duchess of Wellington, Theresa, Queen Mary and Duchess of Sutherland.

Messrs. B. R. Cant and Sons, The Old Rose Gardens, Colchester, were particularly strong with such choice novelties as Theresa, Rayon d'Or, Juliet, and a new seedling Hybrid Tea named Sunbeam, of delicate apricot colouring. Rose du Barri, Countess of Gosford and St. Helena were other gems in this admirable collection.

Messrs. G. Bolton and Son, Buntingford, Herts, showed some good vases of Prince de Bulgarie, Mme. Segond-Weber and Gustave Regis among many others.

Messrs. Paul and Son's group of standard and weeping standard Roses from Cheshunt, Herts, was one of the features of the exhibition, and one which we hope to illustrate in our next issue. The

foreground was occupied by baskets and vases of the best Roses in cultivation.

An extensive and gorgeous display of Roses from Messrs. Hobbies, Limited, Dereham, Norfolk, came in for general admiration. The collection seemed to contain almost all Roses worth growing. The new single Pink Pearl and the new semi-double Effective (carmine) were both well shown in this group.

Messrs. G. Jackman and Son, Woking, Surrey, were represented by a first-rate collection of Roses, in which the delicate shades of Duchess of Wellington, Harry Kirk and Mrs. Alfred Tate were conspicuous.

Mr. J. D. Webster, Chichester, showed Roses in variety, together with Sweet Peas, Vallota purpurea and other flowers.

Mr. John Mattock, New Headington, staged a magnificent group of Roses, with a grand display of Marquise de Sinety as a centre-piece.

Messrs. David Russell and Son showed a grand lot of Frau Karl Druschki Roses in boxes and vases.

A really charming display of cut Roses was sent by the Rev. L. C. Chalmers-Hunt, William Rectory, Hitchin.

Messrs. Hugh Dickson, Limited, Royal Nurseries, Belfast, had a very choice and beautifully-arranged table of Roses comprising the best varieties in cultivation. Mme. Melanie Soupert, Lady Pirrie, Leslie Holland and Frank Workman were four good varieties in an excellent collection.

A sport from Dean Hole, known as Duchess of Normandy, a lovely soft yellow with a suspicion of pink, was shown by Mr. Philip le Cornu of Jersey.

Mr. R. C. Notcutt, The Nursery, Woodbridge, had a capital group of Roses containing a representative collection of the best varieties. Mrs. E. J. Holland was particularly fine.

FRUIT.

A magnificent group of fruit trees in pots was set up by Messrs. James Veitch and Sons. The task of reporting this was particularly difficult, owing to the attractiveness of the fruit. Well-grown trees of Peaches in full bearing included Peregrine, Duke of York, Hale's Early, Early Alfred, Early Silver and Royal George. Well-coloured Nectarines on standards comprised Cardinal, Early Rivers and Lord Napier. Heavily-cropped Plums included specimens of Jefferson's, Oullin's Golden, Denniston's Superb and Blue Rock. The Gages were bearing prolifically and were well grown. Standard and wall Gooseberries included Gipsy Queen, May Duke, Keepsake, Lord Audley and Lord Derby. Of the Currants, Fay's Prolific stood out among the reds, and White Versailles was bearing well in the white section.

S. Heilbut, Esq., showed large half-standard Cherries in pots, Late Black Bigarreau being especially well grown, and Nectarines.

The Duke of Rutland (gardener, Mr. W. H. Divers) showed a collection of Strawberries, twelve varieties. All were exceedingly good, the best being Givon's Prolific, Gunton Park, The Countess and Burghley President.

Mrs. Gilliat (gardener, Mr. G. W. Stacey) showed two Fig trees in pots, which were interesting from the fact that they were rooted from cuttings taken from an old tree growing at 4, Crosby Square, E.C. The original was supposed to be the oldest Fig tree in the City of London.

Messrs. George Bunyard and Co. exhibited a selection of beautifully-coloured Apples, Plums, Pears, Peaches and Nectarines in pots. Noticeable

were perfect specimens of Apple James Grieve, Lady Sudeley and Ben's Red. Huge fruits of Marguerite Marillat Pear were prominent. The central position of the group was occupied by a healthy White Marseilles Fig with numerous large fruits.

The King's Acre Nurseries, Limited, Hereford, showed a collection of fruit trees in pots. Prominent among these were Apples Empress Alexander, The Queen, Norfolk Beauty and Beauty of Kent, Peaches, Nectarines, Plums in variety, Black Currants Ogden's Black and Lee's Prolific, and Figs helped to make up an instructive exhibit. A basket of the King's Acre Newberry attracted attention. This fruit is like an enormous Blackberry in appearance.

Messrs. Laxton, Bedford, staged baskets of Strawberries in their inimitable manner. All of the fruits were splendidly shaped and coloured, and the exhibit proved a great attraction. Among the new varieties Laxton's Rival was prominent. The Earl, called by the firm the Midseason Viscountess, is of exquisite flavour. A cross between Waterloo and Royal Sovereign, The Earl is a big addition to the Strawberry world. The fruits are larger than Viscountess. Another new midseason variety was Maincrop. Red Currant Laxton's Perfection is a huge-berried Currant and a prolific cropper.

Messrs. Stuart Low and Co., Bush Hill Park, showed Figs in pots, including Bourjasotte Grise, Black Ischia, Violet Lepore and Brown Turkey. Some good specimens of pot Grapes, including Appley Towers and Muscat of Hungary, made a good background.

OFFICIAL LIST OF AWARDS.

Coronation Challenge Cup.—To Messrs. James Veitch and Sons, Chelsea, for fruit trees in pots and stove plants.

Wigan Challenge Cup.—To Mr. John Mattock, Oxford, for Roses.

Silver Cups.—To Mr. E. H. L. Davidson, 9, Oxford Square, W., for Orchids; Messrs. Mansell and Hatcher, Rawdon, for Orchids; Messrs. Blackmore and Langdon, Bath, for Begonias and Delphiniums; Messrs. G. and A. Clark, Dover, for herbaceous flowers; Messrs. L. R. Russell, Richmond, for stove and ornamental plants, &c.; Sir Randolph Baker, Bart., for Sweet Peas; Messrs. Sutton and Sons, Reading, for Sweet Peas; Messrs. E. W. King and Co., Coggeshall, for Sweet Peas; Messrs. C. Turner, Slough, for Roses; Messrs. B. R. Cant and Sons, Colchester, for Roses; Messrs. F. Cant and Co., Colchester, for Roses; Messrs. A. Dickson and Sons, Newtownards, for Roses; Messrs. Hugh Dickson, Belfast, for Roses; Messrs. H. Burnett, Guernsey, for Carnations; Messrs. T. S. Ware, Limited, Feltham, for Begonias and hardy plants; S. Heilbut, Esq., (gardener, Mr. G. Camp), for fruit trees in pots; Messrs. G. Bunyard and Co., Maidstone; for alpine Roses, fruit trees and herbaceous plants; Messrs. H. J. Jones, Lewisham, for Phlox and Pelargoniums; Messrs. G. Reuthe, Keston, for herbaceous shrubs and alpine; Messrs. J. Piper and Son, Bayswater, for Dutch and water garden; Messrs. J. Veitch and Son, Chelsea, for flowering plants and Bay trees; Messrs. Hobbies, Limited, Dereham, for Roses; Messrs. Jackman and Son, Woking, for Clematis and herbaceous plants; Messrs. J. MacDonald, Harpenden, for Grasses, showing methods of cultivation; and Messrs. J. Peed and Sons, West Norwood, for Caladiums and flowering plants.

MEDALS.

Gold.—To Messrs. Charlesworth and Co., Hayward's Heath, for Orchids; Sir Jeremiah Colman, Bart., V.M.H., Gatton Park, for Orchids; Messrs. William Cutbush and Son, Highgate, for Carnations; Messrs. William Cutbush and Son, Highgate, for group of flowering plants; Messrs. Paul and Son, Cheshunt, for Roses; Messrs. James Veitch and Sons, Chelsea, for fruit trees in pots; Messrs. James Veitch and Sons, Chelsea, for stove and foliage plants and Orchids; Messrs. R. Wallace and Co., Colchester, for an Old English flower garden; Messrs. James Carter and Co., Raynes Park, for Japanese garden and Sweet Peas; Messrs. Dobbie and Co., Edinburgh, for Sweet Peas; Messrs. J. Hill and Son, Lower Edmonton, for Ferns; Messrs. William Paul and Son, Waltham Cross, for Roses; Mr. Amos Perry, Enfield, for herbaceous plants, Ferns, &c.; Messrs. H. B. May and Sons, Upper Edmonton, for Ferns; J. Gurney Fowler, Esq., South Woodford (gardener, Mr. J. Davis), for Selaginellas and Orchids; and Mr. Maurice Pritchard, Christchurch, for herbaceous plants and water garden.

Silver-gilt Hogg.—To Messrs. Laxton Brothers Bedford, for Strawberries.

Silver-gilt Knightian.—To The King's Acre Nurseries, Hereford, for fruit trees in pots; and the Duke of Rutland (gardener, Mr. W. H. Divers) for fruit.

Silver-gilt Flora.—To Messrs. S. Low and Co., Enfield, for Orchids; Messrs. F. A. Haage, Erfurt, for Cacti; Messrs. W. Wells and Co., Merstham, for herbaceous plants; Mr. W. E. Allen, Donmead, for Sweet Peas; Mr. B. E. Bell, Guernsey, for Carnations; Mr. C. Engelmann, Salford Walden, for Carnations; Messrs. Gunn and Sons, Olton, for herbaceous plants; Messrs. Barr and Sons, Covent Garden, for herbaceous plants and pigmy trees; Mr. J. Box, Lindfield, for hardy flowers and Sweet Peas; Mr. C. Elliott, Stevenage, for alpine; Mr. G. Prince, Oxford, for Roses; Messrs. H. Cannell and Sons, Swanley, for miscellaneous group; Messrs. J. Cheal and Sons, Crawley, for garden and herbaceous plants; Mr. E. Lilley, Guernsey, for Gladioli; Mr. R. C. Notcutt, Woodbridge, for herbaceous plants; and Messrs. Carter Page and Co., London Wall, for flowering plants.

Silver-gilt Banksian.—To Messrs. C. W. Breamore, Winchester, for Sweet Peas; Messrs. S. Bide and Sons, Farnham, for Sweet Peas; Messrs. R. Sydenham, Limited, Birmingham, for Sweet Peas; Mr. J. Douglas, Great Bookham, for Carnations; W. W. Gott, Esq., Cornwall, for Carnations; Messrs. G. Lange, Hampton, for Carnations; Messrs. James Carter and Co., Raynes Park, for Begonias; Messrs. W. Fromow and Sons, Chiswick, for Maples; the Hon. Vicary Gibbs, Aldenham House, for Pelargoniums; and the Countess of Ichester, Holland House, for Cacti, &c.

Silver Knightian.—To Messrs. S. Low and Co., Enfield, for Figs; Rev. L. C. Chalmers-Hunt, Hitchin, for Sweet Peas, vegetables and Roses; and The Hallford French Garden, for vegetables.

Silver Flora.—To Mr. S. W. Flory, Tracy's Nursery, Twickenham, for Orchids; Messrs. H. Dixon, Wandsworth, for Orchids; Messrs. J. K. King and Sons, Coggeshall, for Sweet Peas; Messrs. G. Stark and Son, Great Ryburgh, for Sweet Peas; Messrs. J. Box, Lindfield, for herbaceous flowers, &c.; Messrs. H. Lakeman, Thornton Heath, for Carnations; Mr. C. Bick, Hayes, for Carnations; Messrs. R. H. Bath, Limited, Wisbech, for herbaceous plants; Messrs. Godfrey and Son, Exmouth, for herbaceous plants; Mr. H. Hensley, Crawley, for alpine; Messrs. B. Ladham, Limited, Shirley, for hardy herbaceous plants; Messrs. S. Low and Co., Enfield, for Carnations; Messrs. Phillips and Taylor, Bracknell, for herbaceous plants; Messrs. R. Pritchard, West Moors, for alpine; Mr. C. Russell, for rock garden, &c.; Messrs. Whitelegg and Page, Chislehurst, for herbaceous plants, &c.; Mr. J. D. Webster, Chichester, for Sweet Peas, Roses and Carnations; Messrs. J. Forbes, Hawick, Limited, for Phloxes and herbaceous plants; Messrs. G. Gibson and Co., Bedale, for Delphiniums; M. G. Green, Esq., (gardener, Mr. W. White), for Sweet Peas; Mr. A. L. Gwillim, Sidcup, for Begonias; Messrs. Kelway and Son, Langport, for Delphiniums; Mr. W. A. Manda, St. Albans, for foliage plants; Messrs. T. Rochford and Sons, Broxbourne, for Araucarias; Messrs. F. Smith and Co., Woodbridge, for Phloxes and herbaceous plants; Messrs. J. Waterer and Sons, Bagshot, for Yews; Castle's Shipbreaking Company, Millbank, for garden seats; Mr. T. Crowthier, Fulham, for garden ornaments; Messrs. Liberty and Co., Regent Street, for garden pottery; and Sir George Holford, Westonbirt, for Orchids.

Silver Banksian.—To M. Vacherot, France, for new Carnations; Mr. J. Bruckhaus, Twickenham, for Aspidistras; Mr. H. H. Craze, Highgate, for Violas, &c.; Messrs. G. Mallett and Co., Cheddar, for Lilies; Mr. H. C. Pulham, Elsenham, for herbaceous plants; Messrs. H. Freeman, Limited, Sutton, for rustic work; and the Leyton Timber Company, Limited, Leyton, for rustic work.

Bronze Flora.—To Messrs. Bees, Limited, Liverpool, for hardy flowers; Messrs. Carlton White, New Bond Street, for Box trees; Messrs. W. Fells and Son, Hitchin, for rock plants; The Misses Hopkins, Shepperton, for miscellaneous plants; Messrs. Rich and Co., Bath, for hardy flowers; Messrs. V. Slade, Taunton, for cut blooms and plants; and Messrs. Thompson and Charman, Bushey, for perennials.

FLORAL COMMITTEE'S AWARDS.

First-class Certificates.—To Polypodium mandaiianum, from Mr. W. A. Manda; Lilium warleyense, from Miss Willmott, V.M.H.; and Laetia patens Mayii, from Messrs. H. B. May and Son.

Awards of Merit.—To Border Carnation Jean Douglas, from Mr. J. Douglas; Border Carnation John Ridd, from Mr. J. Douglas; Clematis Lady Betty Balfour, from Messrs. Jackman; Astilbe Avalanche, from G. van Waveren; Nephrolepis exaltata Rochfordii, from Messrs. Rochford; Begonia Mrs. Robert Morton, from Messrs. Blackmore and Langdon; Begonia Florence Nightingale, from Messrs. Blackmore and Langdon; Climbing Rose Ethel, from Mr. C. Turner; and Rose Mrs. Charles S. Hunting, from Messrs. Hugh Dickson.

ORCHID COMMITTEE'S AWARDS.

First-class Certificates.—To Miltonia bycama Le Conquerant, from M. Jules Hye de Crom; Cattleya Artemis, from Lieutenant-Colonel Sir George Holford, Westonbirt; and Cattleya dupreana The Dell variety, from Baron Bruno Schröder.

Awards of Merit.—To Brasso-Cattleya Marion, from Messrs J. Veitch; Labio-Cattleya rubens The Kaiser, from Mr. E. H. Davidson; and Cattleya thurgoodiana Apollo, from Messrs. Stuart Low and Co.

* * * Owing to pressure on our space, we are compelled to hold over the reports of Sweet Peas, Carnations and Vegetables until next week.

THE ROSE GARDEN.

THE ROSE DELL AT KEW.

DURING the months of June and July the Rose Dell is one of the features of Kew. It is situated on the eastern side of the Chinese Pagoda, occupying the position of what twenty years ago was a gravel-pit. The main avenue or grass walk is about fifteen feet wide and one hundred yards long, running through the centre of the dell. The garden dips down gradually towards the centre. No formal scheme of planting has been followed, the idea rather being to obtain, as far as possible, a natural appearance. In some instances large bays have been formed, which are usually devoted to one variety, the banks of soil at the sides being supported with large tree stumps or roots. With the aid of the tree stumps the soil in some instances is as much as 3 feet higher than the grass walk. This has a very pleasing effect when viewed from the centre of the garden; the long, arching growths wreathed in blooms are then seen to the best advantage. The Rose Dell owes much of its beauty to the policy of large, bold grouping, one particular feature at the present time being a large planting of Crimson Rambler some twenty yards long and one-third as wide. Means are employed to vary the height of the different groups. Some are allowed to grow in masses with no artificial support; others, notably the wichuraiana hybrids, spread over the ground and clothe the tree stumps. Rough branches freely clothed with snags, and the trunks of young trees of varying height with a foot or more of the branches left on the main stem to support the growths of the Roses, are freely used, resulting, in some instances, in perfect pillars of bloom approaching twenty feet in height.

Mention has been made of the fact that the site of the Rose Dell was previously a gravel-pit; this means poor soil, quite unsuited to the free growth of many Roses. To obtain such gratifying results the very liberal use of top-spit loam and farmyard manure has been necessary, for, without good cultivation, varieties such as Crimson Rambler are seldom satisfactory. On the other hand, it is really surprising how well some of the wichuraiana hybrids—Alberic Barbier and Jersey Beauty, to give two notable instances—thrive in poor soil. A complete list of all the varieties grown would occupy too much space, only those being mentioned which are especially attractive at the present time.

Helène, one of the Polyantha section raised by Lambert, is represented by one or two groups, the clusters of pale rose blooms with yellow-tinted centres being particularly attractive. The plants of this variety are grown in masses, are self-supporting, and about five feet in height. Tea Rambler is allowed to grow in a similar way and is rather taller in habit, the long, arching growth being freely clothed with the salmon pink blooms. Fragrance is a feature of this rambling Rose. For scrambling over rough branches and tree

stumps, the variety Una, with large single white flowers, deserves attention. One of the very best and most distinct varieties of recent introduction is American Pillar. Free and vigorous in growth, the clusters of large single pink blooms with bright yellow stamens in the centre form an effective contrast to the large, deep green leaves. It is a valuable variety which will be grown much more extensively as it becomes known, not only for massing, but for arches, pergolas, pillars and fences. The variety Tausendschön is notably free-flowering. It has large double flowers, deep pink or rose in colour, and fragrant; it belongs to the Polyantha section. Psyche, one of the first hybrids from Crimson Rambler, as growing here is very free with clusters of pale pink blooms. It is difficult to estimate exactly what we owe to the introduction of that charming little white-flowered Rose, Rosa wichuraiana, from Japan. It may almost be said to have revolutionised the growing of rambling and climbing Roses in our gardens; and what

These notes would not be complete without mention of the Dwarf Polyantha varieties Mme. N. Levassieur, White Pet and Jessie, all of which in their respective positions add to the charm and beauty of the Gardens.

THE SCOTCH ROSES.

The various forms of the Scotch Rose (*Rosa spinosissima*) are among the earliest Roses to bloom. The Scotch Rose is a variable species, found in a variety of forms in a wild state. In some places it is found growing wild on commons and other waste land, where it forms a bush 2 feet or so high, the more floriferous plants being those which occupy the poorer soil. In the vicinity of Swansea Bay it has been noted growing on sandbanks among short grass, its stems rising to a height of but 2 inches or 3 inches, while numerous large white blossoms made an effective carpet. Under cultivation it has adapted itself to good soil, and the best examples are those which are given similar



A VIEW IN THE ROSE DELL AT KEW. THE VARIETY IN THE FOREGROUND IS HELENE.

would the Kew Rose Dell be without the huge masses or mounds and pillars of Alberic Barbier, Jersey Beauty, Lady Gay, Dorothy Perkins, White Dorothy Perkins, Edmond Proust, Hiawatha, Elise Robichon, South Orange Perfection, François Fouchard, Paul Transom and Adelaide Mouille?

A rambling or Polyantha variety of moderate growth is Kathleen, with exceedingly attractive single carmine pink blooms with a distinct white eye. For a single variety Kathleen lasts unusually long in flower. There are many more sorts worthy of mention—The Garland, the old favourite Fellenberg, Queen Alexandra, The Dawson, Trier, Flora, Pink Roamer, Mme. d'Arblay, Amadis and the Musk Rose, *Rosa moschata*, which has found its way up nearly to the top of a large Holly tree 30 feet in height, among the green leaves of which appear the large white clusters of the Musk Rose.

ground to that best suited to other kinds of Roses. Of the several named varieties the following are well worth attention: *R. s. altaica*.—This is a stronger plant than the type, for it forms strong, upright branches 3 feet to 4 feet high. Its ivory white flowers are upwards of two inches across. A couple of useful varieties with double yellow flowers are *luteo flore pleno* and *Harrisonii*, while the single golden-flowered variety, *lutea*, is an excellent variety. *Fulgens* is very similar in habit to the type, though its reddish flowers show it to be quite distinct. *Hispida* was at one time thought to be a distinct species, but is now placed as a variety of the Scotch Rose. Its distinguishing features are its strong, upright habit, intensely spiny branches and large pale yellow flowers. *Rubra* has small red flowers; *William IV.*, reddish blooms; while *Stanwell Perpetual*, *Lass o' Gowrie*, *King of Scots*, *Scotia* and *Meg Merrilies* are other good kinds.

THE GREENHOUSE.

WORK AMONG THE CHRYSANTHEMUMS.

MANY cultivators place the plants in the rows at a proper distance apart as they are finally potted. Others group them, placing four rows quite close together, and leaving them thus for several weeks prior to arranging them more openly. The plants do not suffer—in fact, many benefit—if thus placed, providing they are not left so too long. Unless the plants are spaced out in good time they lose many basal leaves through decay and strong winds after the fuller exposure.

Suitable Summer Positions.—In small gardens there is not much choice as to position; the plants must be arranged where there is room for them. In larger gardens the cultivator has a better chance. There is, however, one position which must always be avoided, namely, too near the south or south-

west side of a high building or wall. The strong winds blowing from the south and south-west strike the wall, and then there is a back current blowing down on the plants which is much cooler than a wind blowing from those quarters direct on the plants before striking the wall. An ideal position for plants grown for all purposes—exhibition, conservatory embellishment, or cut flowers—is one right in the open with a rather low, protecting fence on all sides. There are always cold draughts near high trees and buildings, and the result usually in such circumstances is mildewed leaves and immature wood. Place the plants in rows running north and south, so that the foliage and stems will get the maximum amount of sunshine. The tallest plants should be arranged at the north end of each row, and the dwarfier ones at the south. Allow a space of 22 inches between the pots in the case of the tall ones, and 18 inches in that of the dwarf-growing varieties. The rows should be at least 4 feet apart. If there is ample accommodation, 5 feet would be none too much. Stout stakes and wires attached to them will be necessary for the support of the plants. The longest stakes must be driven into the ground at the north end of each row, and the shorter ones at the south end. Put in the strongest stakes at the ends, and the lighter ones, 7 feet apart, between. Usually only one wire is fixed to the stakes, but I prefer two, 15 inches apart at the south or lowest end and 20 inches at the north end of the row. Two wires keep the plants steadier than one, as any necessary side sticks can be made quite secure to them. All plant sticks must be quite smooth and free from knots; then there will be no loss of shoots through their "buckling" on account of the matting getting lodged under any knots. Specimen plants require more room than any others. There must be space for the cultivator to walk all round them as late as the month of September, when each one is nearly full grown.

Watering.—For at least eighteen days after the final potting, water in great bulk will not be needed. There is a considerable quantity of new soil in the large pots, and when this has been moistened through once it retains much moisture for a long

and the Westonbirt variety are also noteworthy. We mention these to show what a wide range of colour there is in one species, and to point out that many, if not all, of these choice gems were originally imported from Colombia. It follows, then, that where the amateur is a sportsman as well as a plantsman, he will purchase newly-imported examples; but my advice is to buy semi-established pieces from a reliable firm, who will guarantee them unflowered so far as this country is concerned. Then, again, where the grower does not care to take a "sporting chance," really good varieties can be bought for a moderate sum; but the amateur will probably be best satisfied if he selects his plants in flower.

Miltonia Roezlii.—This plant closely resembles *M. vexillaria*, except that the foliage is not so wide, while its constitution is not so robust, thus requiring warm-house treatment.

Miltonia bleuana.—A splendid form of this charming hybrid was figured in *THE GARDEN* for June 4, 1910. The parentage is *M. vexillaria* and *M. Roezlii*, and it is fairly intermediate between these two plants; but the hybridiser has so many different forms or the first-named parent to work with that we get various examples of this choice plant.

Cultural Notes.—As *Miltonias* pass out of flower, and for a few weeks onwards, they must be kept on the dry side, but the bulbs ought not to be allowed to shrivel, for although growth will be slow, *Miltonia vexillaria* is never really at rest. When the new shoots show signs of rooting, any repotting may be done, using a mixture of *Osmunda* fibre, good peat, chopped sphagnum moss and partly-decayed Oak leaves in equal parts, the whole to be sifted through a 1-inch meshed sieve and thoroughly mixed before commencing operations. All the fine particles must be removed, and a 6-inch potful of finely-broken crocks may be added to every bushel of the compost with advantage. *Miltonias* are more or less surface-rooting subjects, so fairly deep pans without side boles should be chosen, which can be filled one-third of their depth with drainage. In repotting, press the soil moderately firm, and the surface should be on a level with the rim of the pan. Never overpot, because it is best to give new soil annually, whereby good results can only be obtained. After the operation is completed, arrange the pans upon inverted flower-pots in a shady part of an intermediate house where the night temperature fluctuates between 55° and 60° Fahr., and only give enough water to maintain the surface moist. This, however, can be increased as root action becomes more vigorous, and in the meantime keep the surroundings damp by frequently spraying between the pots, while the paths and underneath the stages must be occasionally sprinkled with water. Both top and bottom ventilation should be given with discretion, always avoiding a strong current of air passing directly over the plants. The most successful growers of *Miltonia vexillaria* try to maintain as equal a temperature as possible throughout the year, and keep their plants quite clean of thrips. This can be partly brought about by lightly spraying overhead whenever the weather is hot, and by dipping them in a weak solution of XL All Liquid Insecticide at intervals of three weeks or directly any insect pest is noticed. Over-potting is perhaps the greatest pitfall in the culture of *Miltonias*, and overwatering, another common error, should be especially guarded against after repotting.

SENTINEL.



A HEDGE OF MULTIFLORA ROSES IN THE ROSE DELL AT KEW.

time. If kept in a medium state of moisture the roots will enter it freely, the progress of the plants will be steady and satisfactory, the leaves will get greener and larger, and the stems will thicken more at their base. AVON.

ORCHID NOTES.

MILTONIA VEXILLARIA AND ITS ALLIES.

The *Miltonia* is a most useful and decorative Orchid, which, if given ordinary attention, will thrive and produce fine pseudo-bulbs that often push up two spikes bearing from three to seven of its broad, flat flowers. These show considerable variation in colour where a quantity of plants are cultivated, but the type usually has lilac rose blooms deepening to dark rose, while the large lip is generally darker than the other parts.

Some plants have almost white flowers, such as the rare *Snowflake*, shown before the Royal Horticultural Society on June 4, 1912, while a few of the highly-prized forms embrace *rubella* G. D. Owen and *Baron Schröder* (two of the best in cultivation), while *splendens* *Queen Alexandra*

GARDENING FOR BEGINNERS.

CULTURAL NOTES ON CANNAS.

THOSE of the readers of *THE GARDEN* who followed the directions given on this page in the issue for March 16 as to the propagation and subsequent treatment of these gorgeous flowers are, no doubt, reaping the benefit of their labours. Many of the plants are now in bloom, and in order to keep up a succession thereof it is very necessary to bear a few points in mind. An important matter is to remember that these Cannas are liberal feeders; hence they should not be starved in pots too small, while the soil should be of a good, lasting nature. Pots from 6 inches to 7 inches in diameter are a very suitable size for single plants, while masses or clumps in pots as large as a pail are very useful for standing on balconies, terraces, or in many other positions. Plants that have flowered well in the greenhouse in 5-inch pots will not give of their best again unless they are stimulated to make further growth. In order to induce them to do this, a good plan is to turn them out of their pots and, without disturbing the roots in any way, to put them into pots of the size above stated, namely, 6 inches to 7 inches in diameter, according to the vigour of the individual plants. The soil may consist of good turfy loam, two parts; well-decayed manure, one part; and a dash of sand. While these Cannas need a liberal supply of water when the pots are well furnished with roots, they do not, of course, require so much for a short time after repotting, that is, until the roots have taken possession of the new soil.

While the advice to put in larger pots for greenhouse decoration refers principally to those that are in 5-inch ones, it may be that they are already established in pots sufficiently large. In this case the necessary stimulant may be applied in the shape of liquid manure or one of the many concentrated plant foods now so popular. Apart from their value in the greenhouse, these Cannas are, from their noble leafage and striking blossoms, very suitable for taking into the dwelling-house occasionally, where, just dropped into an ornamental vase or jardinière, they will be much admired. When intended for this purpose they must be limited to pots of a suitable size for the receptacles in which they are to be placed.

Out of doors a vigorous specimen planted in a lard-tub will, in an angle of the dwelling-house or similar position, prove an object of beauty throughout the summer months, and in winter it may be safely kept in a cellar or any spot where it is safe from frost. In the flower-beds, too, Cannas

are very attractive, both from a foliage and a floral point of view. In some the leafage is of a pronounced bronzy hue, while in others it is of a rich deep green tint. The colour of the flowers also ranges from pale yellow, almost white, to very deep crimson, through various intermediate shades of yellow, amber, orange, terra-cotta, pink, carmine and scarlet. The list of varieties is such an extensive one that in most cases a rigid selection is necessary.

(scarlet and orange) and William Saunders (deep rich scarlet, a very fine flower). The popular name of Indian Shot is applied to the Cannas, owing to the hardness of their seeds, which, report says, have before now been used as shots. From the hardness of the outer coating the seed often fails to germinate if it is sown in the ordinary way. For this reason some recommend that the seeds be filed, but I prefer to soak them for twenty-four hours in water at a temperature of about 110°. They must be sown directly they are taken from the water, and not be allowed to get dry afterwards. So treated and plunged in a gentle bottom-heat they will grow quickly.



THE BEAUTIFUL CANNA J. B. VAN DER SCHOOT.

In looking over a large collection the other day I noted the following as among the very best in their respective colours: J. B. van der Schoot (herewith illustrated, rich golden yellow, dotted with red), Gaekwar of Baroda (golden yellow, with larger crimson spots than the preceding), A. Ortmann (dark velvety purple), Baron de Richter (bright apricot, lighter edge to petals), Frau E. Kracht (rosy salmon), Fürst Weid (deep crimson), King Humbert (bright reddish orange), Meteore (orange scarlet), Niagara (deep scarlet, with heavy gold margin), Ottawa (rosy cerise), Rosea gigantea (rich rose), R. Wallace (canary yellow), Stuttgartia

and a liberal amount of sand incorporated therewith. Then it is made firm and level for the reception of the cuttings. These should be taken off with a sharp knife, and be at once dropped into a bowl of water in order to keep them from flagging. Before insertion they should have one or two of the bottom pair of leaves removed, and then be dibbled firmly into the border prepared for them. They must then be thoroughly watered through a fine rose. The cuttings take root without covering in any way, but in the case of choice kinds it is more satisfactory to cover them with a hand-light or frame. H. P.

HOW TO PROPAGATE PINKS.

FROM a very remote period Pinks have been favourite garden flowers, and to-day they are as popular as ever they were. They may be increased in various ways; first, by division, that is, by splitting up old and established plants, each piece having a few roots attached thereto. Some varieties lend themselves much better than others to this mode of increase, those of a tufted habit being by far the best. If there is a nice shady border available, this may be done as soon as the flowering season is past; but failing this, the operation had better be delayed till the heat of the summer is over. Next—and this more particularly applies to those of spreading growth—Pinks may be layered in the same way as border Carnations; but the way in which they are most extensively propagated is by means of cuttings, or pipings, as they are often termed. These are formed of the young shoots which are produced with greater or less freedom around the base of established plants. These are usually put in a border under a north wall, or in some position where they are shaded from the sun's rays without being in the drip of overhanging trees.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Winter-flowering Geraniums.—The plants will by now be ready for transferring into their flowering pots, if not already done. Pots of 5 inches and 6 inches will be large enough, the latter being the better of the two. Pot firmly, using a compost consisting principally of loam, with the addition of a little leaf-mould, sand and bone-meal.

Salvias.—For winter flowering these are most effective, and alike valuable for cut-flower purposes. As soon as they are ready for their final potting they may be stood out of doors. When rooting freely they must not be allowed to suffer for the want of water, or spider will surely attack the foliage. Keep the plants well syringed, and stop the growths to induce bushy and shapely plants.

The Hardy Fruit Garden.

Morello Cherries.—The growths made this season should be secured either by tying into the old wood or nailing into bare places. These must not be shortened back, as it is from these growths that next year's crop of fruit will be mainly obtained, and this variety requires plenty of growth for nailing in when the trees are regulated in the winter. Give the roots a good soaking of water, and apply a heavy mulch. If the growths are infested with aphid, give a thoroughly good syringing in the evening with an insecticide.

Protecting Fruit Trees.—As soon as the fruits begin to colour, protection must be afforded, otherwise the birds will take them before they are ripe. Wall trees should have the nets kept at a distance by sticks about a foot long with a small fork at the end.

Young Fruit Trees.—Though not carrying any fruit in most cases, these must not be neglected as regards tying and training, as a good commencement will ensure a well-trained and ultimately fruitful tree, and attention to the growths at this season before the wood gets too hard will greatly assist in keeping the tree straight. Additional strength can be diverted to the main shoots of the tree by systematically stopping the less important ones. Keep the growths clean, and mulch the surface over the roots.

The Kitchen Garden.

Cauliflowers.—As the curds mature, keep them from the light by bending down the leaves or tying with a piece of raffia. If too many become ready for immediate use, pull them up by the roots and hang them up head downwards in a cool cellar or Mushroom-house, where they will remain in good condition for a week or two. The end of this month and during next witnesses many flower shows, and in a collection of vegetables these score a goodly number of points when well shown, so that successional plants should be well watered and assisted with liquid manure. Make good any gaps in the later plantings. Hares and rabbits are especially fond of the plants. Keep well Dutch hoed and sprinkle with soot.

Celery.—Keep the crop well supplied with water during spells of drought, and the foliage dusted with soot while still damp with the morning dew. Though earthing-up is usually practised for a few early sticks, I much prefer to blanch with stiff brown paper, which in many respects is to be preferred, as the stems can be kept much cleaner and worms and slugs cannot get concealed. Commence with a strip about six inches wide, wind round, and secure with a couple of ties of raffia, and then at intervals place another tie or two. Where exhibition Celery is required it is much more easily managed in this way, and copious supplies of water are better given at the roots. I know of several cottagers who grow theirs in this manner. Later supplies are, of course, better earthed-up.

Potatoes.—Earth-up the late plantings without delay. Early sorts should be lifted when growth is completed and the haulm cleared off and burnt or disposed of, so that the ground can be occupied by another crop.

The Rock Garden.

Seed-saving.—Many of the earliest-flowering subjects will be ripening their seed, and when it

is intended to sow any particular kind, the seed pods are best cut off, placed in paper bags, and hung up in a cool, dry place, when they may be cleaned over in the winter months.

Viola gracilis.—This continues to flower profusely, and makes an excellent edging. Keep the seed-pods cut off as fast as these are formed, unless wanted for sowing.

Alpine Poppies (Papaver alpinum).—Both in the rock garden and on the front of the herbaceous borders these are now particularly attractive in their various colours, and easily raised from seed.

Remarks.—The various Thymes are now very attractive, as are also the Helianthemums with their showy flowers and the different Dianths. Keep the surface free from weeds, and lightly fork up any bare places with a small hand-fork. During dry weather water as often as necessary, and damp over night and morning.

The Flower Garden.

Ornamental Climbers.—These are invariably growing apace, and a judicious thinning of the shoots and lightly supporting and regulating them will greatly add to their appearance without destroying their character, and care should, of course, be taken not to destroy any flowering growths. Just beginning to flower is *Tropæolum speciosum*, the Flame Flower, commonly seen in the North, but not so easily managed in the South of England. When growing over some Acanthas and common Box and Yew, as it is here, the effect is fine. The growths seem to enjoy plenty of sun, while the roots like shade.

Annuals.—Keep these well supplied with moisture at the root, allow plenty of room for each plant to mature, and neatly stake any that require it. The *Eschscholtzia*, *Godetias*, *Nigellas* and *Larkspurs* are among many that are useful for cutting when grown in open positions in the front of the shrubberies. In showery weather especially, with careful treatment, the thinnings may be planted out.

Bulbs.—Tulips and other bulbs should be lifted and placed out in the sun before storing away. Named varieties should be carefully preserved in their separate sorts and labelled to prevent any confusion when planted again next season.

Summer Bedding.—The warm showers have had a beneficial effect upon the newly-planted subjects. A damping each evening in the absence of rain will do much to establish them. E. BECKETT, V.M.H.
Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Fruit-Houses.

Late Grapes.—The clusters should be examined for the last time, removing those berries which have not stoned, as well as thinning the berries where they are too close.

Surface-Dressing.—Soot, if enough is applied, is valuable as a colouring agent and to keep the foliage healthy; also a good proprietary Vine manure should be applied, and shortly afterwards the borders watered. Growth on the Vines will recommence, and must be rigidly suppressed as it appears. If crops are heavy, the Vines must not be hurried, but permitted to mature the crop slowly, which results in good colouring and enables the Vines to prepare for next year's campaign. There must be no stinting of liquid, else the soil becomes too dry for healthy root-production.

Hardy Fruit Garden.

Fruit-Picking.—Much labour will be required to keep ripening Strawberries from spoiling. Much depends on the weather for quick or tardy maturing, but, as a rule, the beds should be systematically relieved of ripe fruits twice a week; in very hot weather three times. Over-ripe fruit is of less value than that scarcely quite ripe.

Summer Pruning.—Endeavour to finish this operation soon, the sooner the better. Those who have for any reason to defer this work do so at the expense of the health of the trees, which feel the loss of matured foliage more than that which is young. Continue to watch the extension of the growths on young trees, and fasten them neatly

and securely to the walls. Should aphid prove troublesome, drench the foliage with soapsuds to which a small proportion of petroleum has been added, mixing it well by pumping it with the syringe. Quassia Extract is a valuable summer wash for aphid.

The Vegetable Garden.

Shallots.—The time has arrived for harvesting this crop, which, after cleaning from dead leaves and roots, should be stored in a cold and dry shed.

French Beans.—For late picking seeds should be sown in cold frames in friable, fertile soil a foot in depth. The seeds may be planted 6 inches apart, the space to be widened once the plants are up. The sashes are not needed till cold nights in late autumn, when the plants must be well protected. Osborne's Forcing is one of the best.

Globe Artichokes.—These are now producing heads, and it is very important to cut all before they become too old, which keeps the plants in bearing. On the other hand, when left to flower and decay they cease to throw more stems. It is a good plan to have young plants for a portion of the crop, these producing later than old ones.

Herbs.—Too frequently it happens that in the rush of other work these are neglected, but it is worth while to devote some time to cutting off the stems of Sorrel and the flower-heads of Thyme and Sage. Fennel has such a beautiful flower that the blooms may be preserved for vase-filling; but the above, Mint, and any others requiring attention should certainly be seen to.

Celery.—The earliest batch will now be large enough to have a few inches of soil placed in the trenches, and that planted six weeks ago will be benefited by having an inch in depth of soil from the ridges spread over the surface of the trenches. This has a very beneficial effect, especially in dry weather. Any plants yet to be put out should be planted without further delay.

The Plant-Houses.

Malmaisons.—Some of the earliest plants will have flowered, and though it is not essential to propagate so early, a few layers may be made. The best method is to plunge the balls of the old plants into cold frames, and to put down the layers either into prepared soil or into 3-inch pots. If plants infested with eelworm have to be utilised, very short layers should be made, the parts nearest the tips of the shoots being usually free from infestation.

Begonia Gloire de Lorraine.—Those in 4-inch pots, if potted on into 6-inch or 7-inch ones, will quickly make large plants. A suitable compost is one part light rotten turf and one part leaf-soil. If the soil is heavy, employ it in equal parts with leaf-soil. A small proportion of manure may be added. In this the plants make very rapid progress. An occasional vaporising with nicotine is essential, else the mite which infests this plant very soon renders the foliage unsightly. A high, moist atmosphere suits them at this time of year.

Tuberous Begonias.—Cuttings taken now of special varieties will strike root if inserted in light soil in thumb pots, which should be stood in a cool structure and shaded from the sun. They are slow in rooting, but with ordinary attention nearly all form roots and make nice little tubers, which are valuable for flowering the second year. Plants coming into flower should have the water at the root always slightly strengthened with manure, cow or sheep manure or sulphate of ammonia being suitable.

The Flower Garden.

Gilia coronopifolia.—Seeds of this brilliantly-coloured species should be sown now or soon. The plants grow very slowly while young, and unless started early, they do not flower till late in the second year.

Hollyhocks.—The latest seedlings will now need a stake to each. It need not be very long, only sufficient to steady the spike. Old plants with several spikes are very decorative, and must be examined from time to time and the advancing spikes slung to a central stout stake. The Hollyhock rust disease appears about this time, and the whole plant should be dusted with flowers of sulphur, any leaves that are affected being removed and burned.

R. P. BROTHERSTON.
Tynningham, Prestonkirk, N.B.

THE KITCHEN GARDEN.

TURNIPS.

IN order to keep up a good and constant supply of sweet, tender, fleshy Turnips during the autumn and winter months, two or three sowings of seed should be made at intervals during the month of July, and, in the more favourable parts, the first week in August will not prove too late for the last sowing. For these later sowings I usually depend on Six Weeks and Veitch's Red Globe, both of which are most dependable varieties, and with care and attention will keep sound till late in spring. The land for this crop should be rather firm and in good heart, and have an open position, so that the plants may grow sturdy and robust. Assuming the ground is in readiness, let the drills be drawn 2 inches deep and 18 inches apart, and if the soil is dry, water the drills thoroughly some time previous to sowing the seeds. If birds are troublesome, damp the seeds with a little oil and roll well in powdered red lead. It is a good plan to put about the quantity of seeds required in a flower-saucer, then drop just enough oil to damp the whole of the seeds, scatter enough powdered red lead to just cover them, and then roll with the fingers till they have become well coated over. In this way the birds do not, as a rule, interfere to a great extent. Thin early and keep the hoe in frequent use, both to stir the soil and destroy weeds. To keep the bulbs fresh and sweet during winter is practised in various ways. I find that the best and least troublesome method is to lift the roots when they are the size of cricket balls, and bury them in trenches about three inches beneath the soil with the tops intact. In this way, with a slight covering of litter in very severe weather, the bulbs keep firm till very late in spring. Beet and Carrots are wintered in exactly the same way, and will keep fresh till those sown in spring are large enough for use. Our earliest Turnips to bulb in spring are Early White Milan and Munich; both are small-leaved, and can be grown either in frames or rather thickly on snug borders. They do not last sweet and tender for long in hot weather, but their goodness may be prolonged if lifted and laid in trenches on a cool border.

H. MARKHAM.

REPORT ON MARKET FLOWERS.

THE extensive cultivation of flowers for market is one of the developments of modern farming, of which, as yet, there has been no record, although in many parts of England its importance as a means of exploiting land which would be less profitably devoted to ordinary farm crops is well recognised. The counties in which flower-growing is most widely practised are, according to a recent report issued by the Board of Agriculture and Fisheries, Lincoln, Cambridge, Middlesex, Norfolk, Devon, Somerset, Cornwall, Cheshire, Lancashire, West Riding, Sussex, Kent, Hampshire and Surrey, but there are very few English counties from which some returns were not received, while in Wales and Scotland the industry has established itself in a few localities. Among the flowers most extensively cultivated are Asters, Chrysanthemums, Daffodils, Dahlias, Lilies of the Valley, Narcissi, Nasturtiums, Pansies, Roses, Sweet Peas, Violas, Violets and Wallflowers. The total area devoted to the

cultivation of flowers and shrubs appears to be slightly more than four thousand acres, and the gross value of the production is put at £121,000.

The great extension which has in recent years taken place in the cultivation of crops under glass has, of course, considerably increased the total output of the land. Among the crops included in one or more of the returns received, Tomatoes were the most widely grown, being included in forty-five returns from twenty-two counties. The value of the crop so returned was £43,000. Many of the returns did not state the extent of glass under which the crop was grown, but from those in which the area was stated it appeared that on twenty acres a crop of over six hundred tons was cut, being an average yield of over thirty tons, valued at £830 per acre. Next to Tomatoes, Cucumbers, Grapes and Chrysanthemums seem to be the crops most largely grown under glass, but other crops included in more than one return were Strawberries, Peaches, Lettuce, Radishes, Beans, Rhubarb and Narcissi. The returns in which the area of the glass and the value of the produce of all crops grown thereunder was given represented 155 acres with a total output of £150,000, or £968 per acre.

OBITUARY.

WILLIAM FYFE.

It is with feelings of deep and sincere regret that we announce the death of this well-known gardener,



THE LATE WILLIAM FYFE.

which occurred on June 24. For a period of nineteen years Mr. Fyfe had been head-gardener at Lockinge Park, Wantage, the beautiful Berkshire residence owned by Lady Wantage. Mr. Fyfe had been in indifferent health for the last few years; but the sad news of his death from appendicitis is sudden, for we had the fleeting pleasure of meeting him, apparently well, at the recent International Exhibition. At this exhibition his success in the large Grape class is still fresh in our memories. It was as a fruit-grower that he excelled, and his beautifully-arranged collections of early fruits, particularly at bygone Temple Shows, will long be remembered. He was also a successful competitor with vegetables; and, indeed, it may be said of him that he was a good all-round gardener. The remarkable success achieved at Lockinge in the culture of Rose Fortune's Yellow has been commented upon in earlier issues of THE GARDEN. He will always be remembered, by those who know him, as a genial Scotsman, a keen politician, and one

always willing to further the interests of those who worked under him. He was a member of the fruit and vegetable committee of the Royal Horticultural Society. The deepest sympathy is expressed with the widow in her sad bereavement.

THREE BEAUTIFUL GARDEN LILIES.

AMONG those Lilies which show colour and form in the highest degree, and also furnish a reasonable certainty of permanently establishing themselves in gardens under stated conditions and treatment, three at least are conspicuous. Of this trio the earliest to flower is the citron yellow form of the Caucasian Lily,

Lilium szovitzianum.—Though often confounded with *L. monadelphum*, it is quite distinct and vastly superior. Growing to a height of 4 feet and more, it flowers in the early day of June; the floral segments are thick, wax-like, and sharply recurving as in the Martagon Lilies, to which group it belongs; the stamens are coloured red and form an effective contrast to the citron yellow flowers; the growth of this Lily in spring is not precocious, and I have not found it adversely affected by late frosts. The flowering season of

Lilium testaceum (the Nankeen Lily) follows the previous species, and is at its best during the first fortnight of July. Generally regarded as of hybrid origin, *Lilium testaceum* is, by reason of its colour, one of the most distinct. The stems are chocolate brown, densely clothed with leaves, which gradually diminish in size as they approach the terminal heads of drooping nankeen flowers. In these the petals reflex and the anthers are coloured red. *Lilium testaceum* reaches a height of 5 feet and more when established, and though one of the earliest Lilies to appear above ground in spring, any light protecting branches will ward off frost and break cutting winds.

Lilium Henryii is a comparatively recent introduction, having been introduced from Western China twenty-two years ago. It has proved a valuable garden plant, as when established it grows to a height of 6 feet to 8 feet and bears twelve to twenty-four flowers on each stem, flowering in the open during the latter part of July and the beginning of August. The flowers are orange yellow; the colour is deepest in positions where the plants are screened from the midday sun. *Lilium Henryii* belongs to the group "Archelirion," to which section *L. auratum* and *L. speciosum* are attached. So closely does it resemble the latter in a general way that on its first appearance it was known as the yellow *speciosum*.

All of these Lilies attain perfect development in soil composed of rich fibrous loam and decayed leaf-soil, and if a mulching of well-rotted cow-manure is given every spring, their steady increase is assured. Even upon limestone soil these Lilies promise to increase in no uncertain manner. Home-grown bulbs of any of these Lilies can be procured from English trade growers, and are far superior to imported ones. Planting can be carried out during October and early in November. *L. Henryii* is a stem-rooting Lily and must be planted deeper than the others named; 3 inches to 4 inches of soil above the bulbs is a good depth, allowing 6 inches of soil for *L. Henryii*.

THOMAS SMITH.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

LUPINES DROPPING BUDS (Mrs. C.).—White Lupines are particularly subject to dropping their unopened flower-buds when the soil in which they are planted becomes dry or the root becomes otherwise injured. It is always well to plant them where they are well within reach of moisture.

INJURY TO PHLOXES (L. E.).—The Phlox is attacked by the root-knot eelworm (*Heterodera radicola*). You will find little swellings on the roots, and these are teeming with eelworms. Possibly the pest was introduced with the manure. A dressing of quicklime in the autumn and of sulphate of potash now would do something to improve matters. Many different kinds of plants are subject to the attack of these pests, and no Phlox should be planted on the same soil.

LILIIUM AURATUM (F. V. H.).—We fear you will not find much virtue in the peat-moss litter as received in the bales for stable use, owing to the process of drying and preparing. Subsequently, unless it has been long laid up, turned and incorporated with the soil, it so retains more powerful salts as to become a source of danger if used too near the roots of the plants. Many Lilliums do not require peat at all, and the fact that yours have done well till this year goes to prove that peat is not essential to the species above named. If you experiment at all, our advice is to proceed slowly and use it in moderation. Gardeners generally prefer not to use it unless it is very old.

PHLOX FAILING (Phlox).—We found no insect or grub of any kind in the sample submitted, nor, indeed, any evidence suggestive of insect-life as the cause. Should wireworms exist to any great extent, these may upon occasion perforate the stem, though this pest does not usually attack these plants. The condition of the stems, so far as we could determine (they were much withered when received), was due to injury at or near their base, but we cannot say what has caused the mischief. The splitting noted in one stem is the outcome of rupture, due probably to sudden sharp frost while the stems were young and sappy. Only one of the stems, however, had so suffered, apparently, hence the difficulty of arriving at any definite answer for the whole.

PLANTS FOR FLAGSTONE PATH (D. P. S.).—The most expeditious way of furnishing the interstices between the stones would be to break up the plants of any Sedums you have, and prick out the small portions between the stones without delay. Such Sedums as *acre*, *ureum*, *Lydium*, *hispanicum* and its variety *glaucom*, *dasyphyllum*, *coriaria* and *album* are well suited to the work, and any little fragment will take root. *Campanula pusilla*, *C. p. alba*, *C. pulla* and *C. muralis* are all good, and may be similarly treated. *Thymus Scrypyllum coccineum* is a most charming plant, and any of the *Aizoon Saxifragae* would do admirably. Such Mossy Saxifragae as *densa*, *Whitavii* and *muscoidea atropurpurea* would also prove suitable, and would be best pulled to pieces and planted in August or September. Seeds of *Erinus alpinus*, *Antibactia* and other plants might be sown very thinly in position, provided the soil is good enough. Cuttings of any suitable plants, if rooted in the next few weeks, could be planted in September.

THE GREENHOUSE.

LIGHT-COLOURED DARWIN TULIPS FOR A DARK BORDER (E. F.).—Bearing in mind the limitations imposed upon us by our foreign correspondent, viz., that the Tulips should be about the same height and flower about the same time as *Clara Butt*, and also that, if possible, they should be catalogued in Krelage's list, we would advise as follows: (1) White shades, Painted Lady and Innocence (a pure white Cottage variety); (2) pink shades, The Fawn (Cottage) and Flamingo; (3) pale lilac and mauve shades, *Gandin*, *Batavier* and *Alphon* (Cottage.) It will be noted that three are classed as "May-flowering Cottage Tulips," but they are so similar in their general appearance to Darwins that they may be planted together with the happiest results.

INJURY TO CARNATION (Malmaison).—The Carnation is attacked by the grub of the Carnation-fly (*Hybomyia nigrescens*). This fly is very like a common house-fly in appearance, and about the same size. It lays its eggs either on the foliage or near the root of the Carnation, and you will find the legless maggot feeding in the stem. No better remedy than hand-picking can be used, for the fly is about so long that nothing put on the plant with the object of driving it away will be likely to do any good. The shoots affected can usually be easily detected, and should be pulled out and destroyed as soon as seen. Some growers pick out the maggots with a needle.

THE NEW FUCHSIA BENITA (J. G. K.).—We presume that your reference to Fuchsias above one's head applies to the cordon-trained examples shown at the International Exhibition, Chelsea, by Messrs. Veitch. If so, we may say that the variety *Benita* is of neat, compact growth, and therefore as widely removed from these lofty specimens as it is possible to be. Furthermore, in our own note, which was published in THE GARDEN for May 18 (before the opening of the "International"), we stated that this particular variety was shown at a meeting of the Royal Horticultural Society on April 30. It is a charming little Fuchsia, but whatever its main characteristics may be, it is not a giant in stature.

ASPIDISTRAS (S. P.).—We have never been troubled with the white worms in the soil of the Aspidistras, though, strange to say, we have of late been consulted two or three times in the matter. The pests must have been introduced either in the soil or in the water given to the plants. Lime-water would, in all probability, destroy them. You may prepare this by putting a piece of unslaked lime the size of one's fist in half a pail of water, and allow it to dissolve. After this, stir the water and allow it to stand till quite clear, when it must be poured off without disturbing the sediment. Then water the plants with this, allowing it to drain freely away. The water when clear will only hold a certain amount of lime in solution, and this will not be sufficient to injure the plants.

SEEDLING FREESIAS (E. K. T.).—Freesias, if they are potted singly, may be put into pots 3½ inches or 4 inches in diameter, but we should prefer to place five or six in 5-inch pots. They must be arranged to have all the possible space, that is, four or five disposed equidistant from each other near the edge of the pot, and one in the centre. A suitable soil may be made up of three parts of good loam, two parts of leaf-mould and one part of sand. They may then be placed in a frame or greenhouse, but should be kept rather close and shaded for a few days until they recover from the check of removal. After that they must have plenty of air and light, while a little shading during the heat of the day will be beneficial. As the pots get furnished with roots, an occasional stimulant will be of great service.

AN UNKNOWN DISEASE (Mooriland).—In your far-off clime you would appear to have a *Pelargonium* disease that we are unacquainted with, and which we hope will not find its way to this country. From what you say we think that it is caused by a fungus of some kind, and should suggest spraying the plants with some recognised fungicide. Potassium sulphide, or liver of sulphur as it is often called, is frequently used for the purpose. This is prepared by dissolving an ounce of potassium sulphide in a quart of hot water, and then making it up to two and a-half gallons with cold water. Permanganate of potash dissolved in water is also a good fungicide. This should be used of such a strength that the solution is of a pale rose colour. We are sorry that it is impossible to give any exact information, for such a trouble is new to us.

PALMS (Anxious).—There is little doubt that the cause of the ill-health of your plant of *Kentia belmoreana* is the exposure it received after the pot was broken. You could not have done better than to have repotted it at once and placed it in a warm house, keeping it frequently syringed. Shading from the sun would also be very essential. These Palms require to be well supplied with moisture at all times. Of course, when repotted and there is a mass of fresh soil around the roots, Palms need decidedly less water than when they are fully established and the roots permeate the entire ball of earth. The compost named by you is very suitable for the *Kentias*, and, in fact, for Palms in general. The amount of injury a Palm would sustain by being exposed in the manner detailed by you would, of course, to a great extent depend upon the conditions under which it had previously been grown. If it had been kept in a structure where a high temperature and a large amount of atmospheric moisture were maintained, it would, of course, suffer far more than one grown under harder conditions. We know of no book on the subject likely to suit you.

ROSE GARDEN.

ROSE FOLIAGE INJURED (W. Craig).—The foliage has been attacked by the Rose slugworm. Syringe well upon the under side of the foliage with Jeyes' Horticultural Wash or Tobacco wash, and repeat this at frequent intervals.

SOIL FOR ROSES (E. L. C. F.).—The sediment from a pond is very rich in food for Roses, and would be excellent to use in forming new Rose-beds next autumn. We would advise you to add about one part of this material to one part of good turfy loam, the top spit from a meadow; but if this is not available, then with good soil from your kitchen garden—soil that has been well enriched for a few years with manure. If you could provide a depth of 3 feet of such compost, it would enable you to grow some splendid Roses, adding, as you suggest, lime and manure. This latter should be in a well-decomposed state, that is,

from a heap that has been thrown up for twelve months, unless you can obtain good manure from a farmyard where there is very little straw in its composition.

FRUIT GARDEN.

GOOSEBERRIES FOR INSPECTION (Cromer).—The Gooseberries are not attacked by the American Gooseberry mildew or by any other disease. They appear to have been bruised, and probably have been kept too long after picking.

MULBERRIES NOT RIPENING (E. G.).—We can only account for the failure of your Mulberry fruits to ripen that the roots of the tree have penetrated a very cold or wet streak of soil. Probably if you drained the ground about the roots some good might be done. The specimen sent for examination is the Jerusalem Sage (*Phlomis fruticosa*).

FRUIT TREES AS A GARDEN SCREEN (J. M.).—Cordon trees of the fruit you mention would answer the purpose very well, we think. As we presume your fence will be rather low (less than seven feet), double cordons would succeed better than single cordons. The following varieties are good: Pear Williams' Bon Chrétien, Apple James Grieve and Plum Victoria or Old Green Gage. Yes; certainly you may plant flowers in the border, but not within a foot of the stem of the trees.

SCALE ON APPLE TREE (H. W. S.).—The Apple tree is infested by the scale insect called *Leucaniam caprea*, an insect which lives on a number of other trees as well. At this season eggs only are present, so that no spray can usefully be applied. Later, towards the end of the summer, these eggs will be hatched, and then spraying with paraffin emulsion or with a nicotine wash will be the best remedy to apply. Spraying the trees with 2lb. of caustic soda, three-quarters of a pound of common treacle and ten gallons of water about the end of February would be a useful measure to adopt.

PLUMS NOT SETTING (W. F. M. C.).—We fear it is impossible to say, without seeing the trees, why your wall trees have failed to fruit. From what you say, however, it looks as though they were not properly fertilised. Were other varieties in flower at the same time, and were insects present to carry the pollen? *Victoria* does not require foreign pollen, but many other varieties do. Your best plan, since the Pear-midge larva have made their way into the earth, will be to remove the top 2 inches or 3 inches of soil during the winter, and either burn it or bury it deeply, replacing with fresh. The use of Vaporite would be of doubtful value.

CATERPILLARS ON FRUIT TREES (B. H. A.).—The best wash to apply now for the purpose, is the following: Arsenate of soda (dry), 3oz.; acetate of lead, 6oz.; water, 10 gallons. Dissolve both together in the water and well stir, afterwards adding half a pound of treacle. The same insecticide may be obtained as a paste, called Swift's Arsenate of Lead Paste. It may be had of any sundriesman advertising with us. When ordering, state what it is wanted for. This wash destroys all biting insects, such as caterpillars, moths, &c. It should be applied in a very fine spray through a knapsack pump or syringe, taking care that every part of the foliage is wetted thoroughly. One spraying should suffice. If it does not, spray the affected parts again. One winter spraying with caustic alkali wash is sufficient if carefully and effectively applied to every part of the tree. A too frequent application of these strong washes is inimical to the health of the trees. Early in February is a good time to apply the latter.

KITCHEN GARDEN.

CABBAGES GONE WRONG (H. D.).—No fungus or insect was present, but the Cabbages looked somewhat as though they had passed their best and had begun to decay, perhaps through wet and cold.

CUCUMBERS WITH RED SPIDER (A. Skelton).—The best thing to do with your Cucumbers is to syringe them heavily every morning and evening with clear water. If persisted in, this will soon eradicate the red spider that you complain about, although it would have been better had you adopted it as a preventive. In addition to syringing the plants, also keep the pathways and all woodwork well damped down so as to create a humid atmosphere.

OLD SEAKALE ROOTS (E. A. P.).—Cut off all the flower-spikes at once. Let the plants grow as freely as possible during the summer. There will be nothing to do to them, except to keep the ground round them free from weeds. As soon as the leaves are dead (in the autumn), clear them away, taking care not to injure the top or crown of the roots in doing so. The crowns should then be covered over with sifted ashes about three inches deep. At Christmas-time, place over the roots large Seakale pots (inverted, of course), and then over and among the pots place a quantity of fermenting material, such as strawy litter from the stable, and fresh leaves in equal parts. Tread this material firmly down among the pots, covering them over from 9 inches to 1 foot deep. This material, when it ferments, will create a mild growing heat, and in five weeks' time you may look for some Seakale ready to eat. Another way of treating it is to bury the ground over (where it grows) to a depth of 12 inches with soil, leaf-mould and clean sifted ashes some time in March. The result will be that in April well-blanching, delicious Seakale will grow through this covering of soil. It should be cut off at the crown of the root as soon as the tip end of the growth appears above ground.

THE GARDEN.

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JULY 13, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

*The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.*

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

An Interesting Martagon Lily.—Lilium Martagon Cataniae is a very deep-coloured Martagon Lily, darker in shade than the variety dalmaticum, but quite a good grower, though not increasing rapidly. It is by no means showy, but it is pleasing in its own quiet way, and is generally liked by those who see it and are not entirely wedded to gay or bright colours. It does well in an ordinary border where the soil is inclined to be light.

The Kilmarnock Spotted Orchis.—The Kilmarnock variety of the Orchis maculata is a scarce and very beautiful border or bog plant which is to be found in a few Scottish gardens. It was, we understand, found a good many years ago on a moor in the Kilmarnock district, and has been cultivated in gardens since that time. It is usually very fine in the garden of Colonel Maxwell-Witham at Kirkconnell, Newabbey, and there is at present a very good group in that of Mr. James Davidson, Summerville, Dumfries, where it has been looking very fine indeed in a border with a background of Cassinia fulvida. It is a really noble Orchis, with long, densely-flowered spikes of purple blooms and handsome spotted leaves.

Statices Suworowi.—This annual species of Statice with an awkward name, which was introduced from Turkestan in 1883, is, when grown in pots, of considerable value for greenhouse decoration, as its long, strangely-disposed spikes of blossoms attract attention by reason of their beauty and uncommon appearance. In colour the flowers vary from white to pinkish mauve or lilac. They also retain their freshness for a considerable time. In order to have good examples at this season, the seed should be sown early in the year. Besides this, the different shrubby forms which used to be so much grown as large specimen plants, such as Statice profusa, S. intermedia and S. Holfordii, are all desirable in the greenhouse, the pretty blue flowers being very effective, while, what is more, if they are cut before their beauty is over they may be dried for use during the winter months.

Killing Cutworms.—That poison bran-mash is the best thing to kill cutworms is the belief of Mr. A. L. Lovett, Crop Pest Expert of the Oregon Agricultural College, Corvallis. "The cutworms pass the winter in the soil as partly grown larvæ," he says. "They are in the soil in the spring when the ground is prepared for planting. The poison mash should be sown over the ground a few days before the crop appears. If there is no green vegetation, the worms eat the mash greedily, and the field is freed of them before the plants appear. For later treatment the only way is to put a small heap of the mash around the base of the plants to be protected. To make the mash, mix sixteen pounds of coarse bran, a pound of Paris green,

half a pound of salt, a gallon of any cheap syrup, and enough water (warm) to make a heavy mash. Poultry should not, of course, have free range where the poison is."

Rose Mme. Alfred Carriere.—This charming white Rose has been flowering particularly well in many gardens this year. Although the blooms are not so full as those of some other varieties, they are exceedingly pleasing, and, as they are produced over a long season, are often available at times when other Roses are devoid of bloom. We recently saw a huge specimen in a vicarage garden in Essex, the head of which was at least 7 feet in diameter.

A Good New Pea.—A new second-early Pea that has done remarkably well with us this year is Carter's International. It is a strong-growing variety, attaining a height of nearly six feet, and produces a heavy crop of large, slightly-curved deep green pods. These contain on an average ten large Peas each, the colour of these being a beautiful verdant green. This colour is fully retained when the Peas are cooked. The flavour is first-class, and we regard International as a good Pea in every respect. It was raised by crossing Early Morn with Duke of Albany.

Roses for Autumn Flowering.—Where a good crop of Roses is desired in the autumn, the bushes ought to have some attention at the present time. As soon as the summer flowers have faded, they should be cut out, removing each one or cluster down to the first plump wood-bud. This will induce the bushes to make new wood, which will bear flowers in the autumn. A dressing of some good fertiliser, sprinkled round the bushes and hoed in, will also benefit the plants considerably. If obtainable, a 2-inch-thick mulching of short, well-decayed farmyard or stable manure will be even better than the fertiliser.

Wart Disease of Potatoes.—The Board of Agriculture and Fisheries desire to inform Potato-growers that a case of wart disease (Synchitrium endobioticum, Percival) of Potatoes has occurred in Cheshire, and to remind them that all cases of this disease must be reported to the police or other officers appointed by the local authority for the purpose. Notifications may be sent to the Board, who will forward them to the proper quarter. The Board desire also to warn Potato-growers that in view of the rainfall of the past month, the Potato disease caused by Phytophthora infestans, De Bary, may be expected before long to attack the Potato crop, and they recommend that crops should be sprayed with Bordeaux mixture at once. This disease is not required to be notified. Leaflets as to both the above-named diseases may be obtained free of all cost on application to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W. Letters so addressed need not be stamped.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Beautiful Herbaceous Plant.—I am sending you some blooms of *Ostrowskia magnifica*, as I think it is one of the best herbaceous plants anyone can grow. I have twelve clumps altogether about the flower garden; three of the best are carrying 344 flowers, or an average of 114 fully-matured blooms to each plant. Some of the blooms measure 7 inches to 8 inches across.—H. G. W. [The flowers sent were remarkably fine; they are bell-shaped, and pale mauve in colour. It should not be overlooked that this handsome plant is rather tender. It does best in a sandy soil in full sun. In winter it is advisable to protect the tuberous roots with dry litter.—ED.]

A Good Border Plant (*Bahia lanata*).—The recognised name of this plant is now *Eriophyllum cæspitosum*, but it is generally cultivated as *Bahia lanata*. It does not always bear a good reputation for hardiness, but there is little fear of losing it in places with a moderate climate, wet in winter being one of its principal enemies. I saw a good plant of it the other day in Mr. James Davidson's garden at Summerville, Dumfries, where it has been in a herbaceous border for a considerable number of years. There it is taller than the generally-accounted height of from 6 inches to 15 inches, being about two feet high. It is a good plant, with small, pleasing, finely-divided leaves of a greyish or silvery appearance, and many small, bright yellow flowers. It makes a good border plant, but it is even more pleasing on large rockwork, where it hangs nicely over the stones. In a border it requires staking. Though a dryish soil is recommended for *B. lanata*, it does not seem to require this if the position is well drained.—S. ARNOTT.

Bedding Roses.—In the issue for May 11 of THE GARDEN an article on bedding Roses appears, in which the variety General Macarthur is highly extolled as a bedder; in fact, the writer adds he would prefer it—at least for autumn effect—to Richmond. Where the present writer is employed, the very opposite is the case; Richmond is far the more effective Rose. The writer quoted does not mention what soil he has to deal with, and this may account for the difference. We have a rather heavy soil and on clay. I am correct in saying that Richmond, with us, produces half as many flowers again as General Macarthur, blooms earlier and much more continuously. General Macarthur will beat Richmond for substance of flower, stronger foliage, and in being less prone to mildew attacks. I would hazard the statement that no Rose grown in a bed will make growth, form buds and come out in flower so quickly as Richmond. The variety nearest approaching it in every respect, with us, is George Reimers. They are hardly discernible one from the other when seen a little distance away.—C. T., *Hightate*.

Rose Conrad F. Meyer.—Both in my garden here and in my late garden in South Hampshire this Rose has proved most disappointing, though each has a good Rose soil. Early in May it begins throwing the loveliest blooms, larger than La France and almost as refined. It keeps it up for a fortnight or three weeks, and then the leaves get black spot, and in the course of ten days it is almost as bare as in midwinter; it recovers in a measure, but never gives another flower worth looking at. I have tried it in different aspects and with different

treatment, but the result is always much the same. My present plants are loosely trained to pillars. I much regret its failure, as it is so attractive in its earliness. Perhaps your correspondent "An Essex Reader," whose note appeared in last week's issue, might have some hints to give.—ROBERT PEEL SHELDON, *Flimwell Grange, Hawkhurst, Kent*.

Exhibiting Daffodils.—With reference to the note by "A Small Exhibitor," June 29, page 326, who suggests a revised word for "faking" and disagrees with those who condemn the practice of "improving" blooms for the exhibition bench, if we tolerate these stiff collars round the neck of our exhibition flowers to support their weak, flabby perianths, then we both encourage the creation of these feeble flowers and we knowingly mislead the public and persuade ourselves that these flowers are more even and perfect than they really are, as your correspondent Mr. Watts admits (see page 315) that he also was "almost converted" by these "neat little discs." Meritorious blooms require no "faking"; faked flowers from their very weakness condemn themselves, and must therefore suffer for the want of the necessary points which the former carries. Daffodil blooms for exhibition must be shown "looking their best," but they cannot be compared to the "*débutantes*" appearing at a *Levée*." If "A Small Exhibitor" wishes to present her at Court, Mistress Daffodil must appear as she is. He might ask, in the words of Margaret Johnson, with slight variations:

"Will they laugh at your old-fashioned gown,
Daffodil?
At your simple and quaint little gown,
As you enter the (Court) of the town:
Pass you by with a sneer and a frown,
Daffodil?
Nay, tell them old fashions are best,
Daffodil.
Old friends are the dearest and best,
And the flower we would wear at our breast
(One without disc is the best),
Daffodil."

I for one would be sorry to see the day when faked blooms would be tolerated on the exhibition table or new varieties thus presented for awards.—J. E. D.

— I really must reply to my old friend Mr. Chapman. Let us see what he says on behalf of the faked flower; but, first of all, how does he know the flower I referred to was otherwise normal? Does he know which flower it was? I understood that it was the first bloom of a seedling, and therefore there could be no "otherwise" about it; and even if it had been a deformed bloom of an otherwise perfect variety, I say it is not the deformed flowers that we want to see at our shows. Oh! Mr. Chapman, how cross you must have been when you wrote that you suppose I would have "stuck up" the flower just as it was, and to tell us that you would not go to look at it! I can see the look of angry disapproval on your usually genial countenance. But really, seriously, if I did show a deformed flower, I should be the last to expect you to go out of your way to see it. Do you really mean to tell me that, if I stuck a paper collar on, it would make all the difference? It seems to me we have come down to the very root of the whole question—a flower that I would discard from a bed of seedlings, and which you would not look at, is to be faked up and to be accepted as a good and honest bloom. If this is so, heaven help the poor Daffodil.—W. A. WATTS.

— So far there seems to have been few in favour of the suggestion of Mr. W. A. Watts of discarding artificial aid in exhibiting Daffodils, perhaps because the replies have come from those only who exhibit, and find it necessary to adopt these methods, for they surely must be the losers should paper collars be decided against by the judges. May I be permitted to write from the other point of view, namely, of those who visit the shows and for whom exhibitors exhibit, I believe? Of what value to us is a flower, for instance, which is dependent on a paper collar for its beauty of form? We go to shows to enjoy the sight of the wonderful results of modern hybridisation and cultivation, and to seek further beautiful flowers for our gardens, and if not to procure them at once, to take notes in order to be able to possess at some future date those which attract us most. How much more easily and with much less subsequent disappointment could we select them from flowers (and this does not apply to Daffodils only) exhibited in their natural state without any unnatural means of support! If some exhibitors feel that they could not do without the paper collars, could not they exhibit in a class in which artificial aid is allowed? Then we, to whom flowers in that class would be of no value, could pass on to select those which, in our own gardens with good cultivation, would be equal to those seen at the shows.—A GARDENER.

***Dianthus neglectus*.**—It is perhaps rather misleading to call this very lovely plant a "Glacier Pink," for *D. neglectus* (as well as *D. alpinus*, *D. callizonus* and *D. glacialis*) shows the most studious avoidance of glaciers or glacial levels. In fact, as I believe, there is no Glacier Pink, the alpine *Dianthus* all stopping a good way short of those high places which alone can fairly entitle their inhabitants to be called "glacial." The most flagrant misnomer is in the case of *D. glacialis* itself, which frequents, with *Primula intermedia*, the upper moors of the Engadine, and, above Heibgenblut, may be found luxuriating in the gutters by the side of the highway. *D. alpinus* appears in nature as strongly attached to the limestone as *D. glacialis* to the granite; it occupies all the turf of the Styrian limestones, between some six thousand feet to seven thousand feet. Thus also, and in the same situations and at the same elevation, grows *D. neglectus*, in a comparatively small district of the Western Alps, ranging from Dauphiné and the Greuans down through the Cottians and along the Maritimes. It climbs, indeed, rather higher than the others, ascending to some eight thousand feet; for instance, on the Col de la Croix, where in the fine turf it develops a dwarf and compact alpine form of great charm. But it is always a grass plant, growing in full soil. It is a very variable species (so, indeed, are *alpinus* and *callizonus*), and should always be bought or collected in flower, as there are many forms of lanky habit with thin and starry flowers. On the other hand, I have often found plants of dense, neat growth, with blossoms round and solid and splendid, the best of these, I am told, belonging to the Cottian Alps. On Mont Cenis the prevailing form is starry, though brilliant; on the Col de Pesio in the Maritime Alps it is especially gorgeous in size and colour. Finally, though this and all the alpine Pinks thrive well and show great beauty in the moraine, it is interesting to remember that they are all invariably plants of the upper alpine turf, having affinity of taste not with the high alpine, such as *Campanula cenisia*, but with such lawn plants as *Viola calcarata* and *Viola alpina*.—REGINALD FARRER.

Rose Bennett's Seedling.—You were good enough some four or five years ago to put into your paper a photograph of a Bennett's Seedling white weeping Rose tree in the garden here. It has grown considerably since then, and this year it is a perfect picture. It measures 60 feet in circumference and is 9 feet high. It was planted fifteen years ago, quite a small tree. I enclose a photograph of it.—J. B. WESTROFF, *Holyport, near Maidenhead, Berks.*

Diplacus glutinosus.—This is not a new plant by any means, but it is becoming somewhat rare in amateurs' greenhouses. As a free-flowering plant of easy culture, amateurs who possess houses only moderately heated would find it a grand one to include in their collections. The blossoms, which are rich orange in colour, and in form like those of the *Mimulus*, look very beautiful on nicely-grown plants. It requires no artificial heat in the summer-time, and is a fine subject for dwelling-room windows. Cuttings of young wood are easily propagated in a sandy compost.—B.

Rose Marquise de Sinety.—The flowers and buds of this variety which appeared on the cover of THE GARDEN for June 22 are extremely good representations of the Rose itself, and I feel quite sure that many readers will decide to grow some plants after seeing them and reading the reference on page 316 of the same issue. Similar colours are much needed in the Rose world, and, as far as I am concerned, I must plead to a great liking for them. "P." gives the variety a good character as a heavy or clayey soil plant, and I can recommend it as a good doer in a light rooting medium, which proves it to be a fine all-round Rose.—AVON.

Brown Calceolarias.—One does not see as many brown or bronze-coloured Calceolarias in flower gardens now as formerly, say, twenty years ago. The yellow variety, or, rather, varieties, are much in evidence, too much so, I think, in many instances. They are to be seen in nearly all the beds, in the vases, and even in the window-boxes in many gardens, the general effect not being very pleasing. There is nothing wrong with yellow Calceolarias when judiciously used, the bad effect being apparent when the plants are misused, as before stated—planted too lavishly and mixed with other colours indiscriminately. The brown-flowered variety gives "tone" to a flower-bed; the blossoms are richly coloured, and, to my mind, very charming. There is nothing glaring about them, and they harmonise so well with other colours. I confess I am fond of them, and may be considered prejudiced in their favour. I would like, however, to make an appeal for their extended culture. The time will soon come when cuttings must be put in.—G. G.

FORTHCOMING EVENTS.

July 16.—Royal Horticultural Society's Exhibition. Lecture at 3 p.m. by Mr. E. A. Bunyard on "The Flowers of Apples and Their Aid in Identifying Varieties." Southampton Jubilee Show (two days).

July 17.—Cardiff and County Flower Show (two days). Bishop's Stortford Flower Show. Caterham Flower Show. Liverpool Horticultural Association's Sweet Pea Show. Luton Sweet Pea and Rose Show. Saltaire and Shipley Rose Show.

July 18.—Dunfermline Flower Show (two days).

July 19.—Birmingham Floral Exhibition (two days). National Rose Society's Show at Belfast. Handsworth Flower Show (two days).

July 20.—Royal Horticultural Society of Perthshire Show.

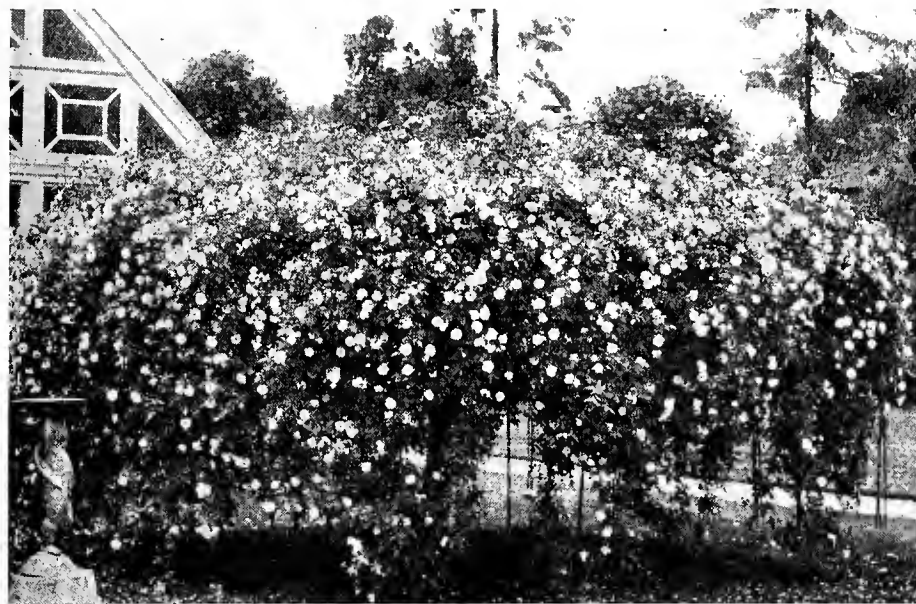
THE ROCK AND WATER GARDEN.

LINARIA ANTICARIA.

A PRETTY little Toadflax which does not appear to be known to everyone is *Linaria anticaria*, whose hardness is not beyond doubt, but which usually sows itself so freely as to be practically as good as a perennial. It blooms the same season as sown if this is done in spring, but self-sown seedlings do not, of course, flower until the following year. Frequently the plants survive for several years, especially if on a piece of dry, well-drained soil, and a little attention in this respect will be well repaid by the longer life of the plants. *L. anticaria* is only a few inches high, and is of rather trailing habit. The leaves are narrow and rather glaucous in hue, and the pretty flowers are most variable in colour. Some are

P. farinosa is found cultivated in quantity in this country. Indeed, it will grow in most places if given moderate shade, moisture and a climate anything from that of the Alps to temperate. This quality needs emphasis, as some folk allege difficulty in growing it. The present writer can testify, out of a long experience, that in his level herbaceous border exposed to the sometimes pitiless Scotch climate *P. farinosa* not only forms large cushioned plants, which throw up their dainty blossoms, in spite of cold and rain, but seeds itself, which is indisputable evidence that the plant has found a home. The Bird's-eye Primrose has one little marked failing. Like other Primulas, only more so, it seems to forget that it must ever be of the earth earthy. It has a tendency to work itself out of the soil. This waywardness has to be corrected by replanting from time to time.

Some varieties of *P. farinosa* deserve to be mentioned. Perhaps the first place should be given to *Scotica*, a native of Sutherland and Caithness, where it grows in moist places. This



THE BEAUTIFUL AYRSHIRE ROSE BENNETT'S SEEDLING IN A READER'S GARDEN.

white, but there are shades of yellow, purple, lilac and buff, the greater number being decorated with a yellow lip and pretty reticulations of dark colouring. The whole appearance of this Toadflax is attractive, and it makes an excellent subject for a dry rockery or for a wall garden.

Dumfries.

S. ARNOTT.

THE BIRD'S-EYE PRIMROSE.

(*PRIMULA FARINOSA.*)

This beautiful little plant, with its small and graceful silvery leaves and dainty, delicately-tinted flowers, is sometimes called the Bird's-eye Primrose. The flowers, which appear in April or earlier, range in colour from lilac to purest white, and are borne in a many-flowered umbel on a slender spike, generally an inch or so long—longer, certainly, than the leaves from which it springs. It is as if one plant were saying to the careless passer-by, "You may fail to notice the modest grace of my leaves, but I have only to hold up to you my flower to gain the reward of beauty."

is an exquisite little Primula, with densely-powdered leaves and deep rich purple flowers with a yellow eye. Unfortunately, in my experience, *Scotica* always damps off after flowering. It may be that its heart is still "in the Hielans." However, as it seeds freely and the seeds germinate well, there is no difficulty in maintaining a stock. The Primulas *algida*, *Warei* and *magellanica* are only varieties of *farinosa*, and are hardly to be recommended, as *farinosa* will produce from seed plants and flowers equal in beauty to these so-called named varieties.

Longiflora is really an enlarged form of *farinosa*, but its leaves are not mealy and the flowers are much larger and of a deeper purple colour with a white eye. By far the most robust of this lot is *frondosa*, a plant resembling *farinosa* in most ways. What it has gained in strength it has lost in beauty. The flowers are of a light lilac colour. It comes from a far country—Thrace, but seems to have forgotten all about it, for it grows with us anywhere it is planted and grows vigorously. It is, however, very temperate; it does not like too much liquid.

Morelands, Duns.

JOHN MACWATT.

THE ROCK ROSES.

THE Cistuses, or Rock Roses, consist of numerous evergreen shrubs, the greater part natives of Southern Europe. This being a comparatively mild locality, favourable positions are necessary for their successful cultivation in this country. These, however, are not difficult to find in most gardens, even in the North, where the most likely situation will be at the foot of a sunny south or west wall. Their value for certain positions in the rock garden is well shown in the illustration of a magnificent plant of *Cistus salvifolius* in the rock garden at Wisley. A specimen dotted here and there of the dwarf-growing Rock Roses is useful



CISTUS SALVIFOLIUS GROWING AMONG ROCKS IN A SURREY GARDEN.

to relieve the flat appearance of low-growing alpine plants on a sunny rockery. Positions for a group or two can usually be found on the top of a rockery with perhaps a background of trees, where ordinary low-growing alpine plants would not be suitable. Dry, sunny banks or slopes form ideal spots to mass the Cistuses, for they thrive and flower better in poor soils which are well drained than when growing in rich loamy soil.

Seeds and cuttings provide ready means of increase. August or September is a good time to insert cuttings, which will root in a cold frame or in a propagating-frame with slight bottom-heat. Seeds are best sown in spring. As Rock Roses are somewhat difficult subjects to transplant, they should be grown in pots till large enough to plant in their permanent positions. The greatest profusion of blossoms is produced during June and early July. A selection of the most useful species should include *C. corbariensis*, a white-flowered hybrid, dense-growing, about two feet high; *C. cyrius*, large white flowers with dark red spots at the base of each petal, one of the best tall-growing kinds; *C. laurifolius*, the hardiest species, has white flowers and grows 4 feet to 6 feet high; *C. ladaniferus*, the Gum Cistus, the large white flowers blotched at the base, one of the most popular species, and *C. salvifolius*, so named in reference to the Sage-like leaves, flowers white with yellow centres.

THE ROSE GARDEN.

ROSE CLIMBING MRS. W. J. GRANT.

A FEW years ago I put in a plant of this Rose in a border near the back wall of a small greenhouse. The position was a hot one, especially for a Rose, and it did not suit the variety above named. The growth was very unsatisfactory, and few flowers opened. Then I lifted the Rose and planted it near a pillar in the open garden. No sooner had the plant recovered from its removal than it was unavoidably necessary to again shift it. This

Budding, like pruning, is dealt with every season, and may well seem a little tiring to old hands; but it is of such general interest to the beginner that a few words must be given annually for the better guidance of the fresh grower.

Although this subject was touched upon in an illustrated article in THE GARDEN for June 22, page 321, a few further practical hints may also be welcome. Under no circumstances should the operation be forced—I mean, we must not meet with any difficulty in raising the bark upon the stock, nor of taking the Rose bud from the shoot of growth and the removal of the small portion of wood covering the seat of the eye or bud. To accomplish this easily the sap upon both stocks and sticks of Rose buds must be active, and more depends upon this condition than any set dates. If it cannot be done easily, we must perform disturb and injure the bark, also the glutinous sap so necessary to a quick and sound union of Rose bud and stock.

Too many amateur budders do not sufficiently realise how necessary it is that the eye or seat of the Rose bud should be in a certain condition. If too old or too young it is waste of material and labour. A little observant thought will show when this seat is in the correct stage, as it will be plainly visible and in a condition to rest firmly down upon the exposed wood of the shoot it is to be attached to. I do not propose going deeply into the methods of budding. A few illustrations, or, better still, a practical demonstration, will make the whole matter much plainer than any written words could possibly do. Another fault lies in not tying tightly enough to ensure the seat resting firmly to the wood. Cutting into the stock too deeply when making either a longitudinal or transverse cut in the bark is a frequent mistake. Just penetrating the bark is ample; any deeper only injures, and is often the primary cause of failure.

Have everything ready to hand, and avoid any risk of the sap drying up, whether upon the bud or stock. If the buds do not come away freely, cut off the bottoms of the sticks afresh and plunge in water. Many buds are almost hopelessly dried up through the neglect to cut away green leaves directly, these absorbing all the sap in a wonderfully short time, and no after-moisture from water absorption can possibly be so good as the natural sap. If the bark of the stocks clings at all, let them be watered freely a week or so before budding. The sap artificially encouraged in the stock by this means is valuable. It is, in fact, quite natural through being supplied by root action, and is altogether different to moisture obtained by soaking a severed shoot.

Always endeavour to work the Rose bud as nearly upon the roots of dwarf stocks as you can, and similarly as close to the main stem as possible when operating upon the side shoulders of hedge Briars growing in standard form. This is of great importance in avoiding suckers, and we should aim for as little of the stock growth as possible. If dwarf stocks are properly prepared and planted, as advised in a note at the planting season, it is not difficult to work the Rose bud direct upon the base of the roots, and thus none but suckers, which are sometimes formed from the roots themselves, can be produced. The plants are, to all intents and purposes, upon their own roots, none but the Rose being able to develop, and we get the full benefit of more vigorous foster-roots.

As time goes on and the stocks naturally swell from growth, the ties will need overhauling and releasing against constriction. Any failures, too,

time it was transferred to a border on the north side of a 6-foot fence. Although some shade was thus afforded the plant, it got plenty of light, and the sun's rays had some effect on it over the top of the wooden fence. The plant began to improve very soon after it was planted in this north border, and has since borne some lovely blooms, exquisite in form and colour, and worthy of a stand in an exhibition, although no special attention has been given to it. Judging from my experience of this Rose, it seems to be a variety that does best in partial shade. The variety would do best, no doubt, on the north side of a span-roofed house when planted in glass structures, but I should like to have "P.'s" and other Rose experts' views. They would be interesting and useful to others besides myself. SHAMROCK.

WORK AMONG THE ROSES.

SINCE penning my last notes we have been favoured with several very welcome showers, and the influence these have upon insect-life has once more been demonstrated. Scarcely any insects approve of wet, and the rains have had a wonderful cleansing effect. This is only one more proof of the good syringing does, and should encourage a more general use of weak insecticides at all times.

Perhaps the most important work among Roses now is budding, which should soon be commenced.

can generally be seen in three to four weeks from budding, when it is often not too late to insert a second bud. But if we take due care as regards the condition of stocks and buds, also not to muddle the operation and bruise in any way, there will be very few failures. So far as material for tying in the bud is concerned, I have no choice between raffia, bast, or worsted. In the latter case more care against possible constriction is needed because of its more enduring character, while raffia will frequently work loose or decay about the proper time.

I want to call attention to a Rose that has been particularly good this season; that is, Sarah Bernhardt. As a dark and very sweet-scented maroon-shaded Rose it is excellent, of good shape, free-flowering, and a splendid pillar or wall Rose. We very much needed a good dark bloom in this connection, and I have no fault to find with Sarah Bernhardt. Some of my early flowers have been almost as dark as Prince Camille de Rohan, and very similar in size and form. A. P.

THE FLOWER GARDEN.

BIENNIALS AND PERENNIALS FROM SEEDS.

SEASONABLE REMINDERS.

SUCCESS in gardening operations, be they large or small, depends not a little upon doing a thing at the right moment. This is as true of seed-sowing as it is of planting or transplanting,

and by the observance of such things, in conjunction with obeying the minor details or daily routine that should come between, the best results are most likely to follow. By starting now, and by sowing seeds of, say, Antirrhinums, in the open ground, one may secure a sumptuous display of these flowers in June and July of next year that will not only be a joy to himself, but the wonder—probably the envy—of his neighbours. In doing such work as this in season the amateur is also doing it at practically no cost, since the Antirrhinum or Snapdragon is, when so treated, to all intents and purposes a hardy perennial, *i.e.*, one capable of taking care of itself in the open garden. In like manner Canterbury Bells, Sweet Williams, Cornflowers, Wallflowers, Foxgloves, Myosotis, Pansies, Violas and others may be treated, and with the best possible results, because of the sturdy examples which follow intelligent treatment. In this latter phrase is naturally included the sowing of the seeds, and there is no way to compare with that of

Sowing in Drills.—By arranging these 9 inches asunder, or more if space permits, room is afforded for weeding, for stirring the soil, for thinning the seedlings, and for any other work which may be necessary. This sowing in drills one might call the systemised plan, as opposed to the haphazard method of broadcasting, which, if not of a slovenly nature, is virtually impracticable, seeing that it excludes the cultivator from the land for the time being. The position of the seed-bed is of some importance, and while sheltered as much as may be,

should be also away from the area of large overhanging trees, which are capable of much injury to the seedlings. The greatest evil, however, is the tendency to draw the seedlings early into a weak and spindly growth, from which they are unable to recover. Hence select a position apart from trees, a border having a south-west aspect being very good.

Sowing in Frames.—Frame-sown seeds have an advantage over those sown in the open, in that the former may be kept secure from birds and animals generally, may be afforded shade should occasion require it, and likewise be given protection from heavy, pelting rains. A considerable drawback to the frame, however, is the arranging of the soil-bed at the same angle as the light, the result being that the seedlings at the lower end—the point where, naturally, most moisture collects—are usually saturated, while those at the upper end suffer from the opposite extreme of dryness. Hence a nearly or quite level surface should be arrived at.

Preparation of the Soil.—The soil of the seed-bed should be well prepared by digging, and particularly so by being finely pulverised. The upper portion may be sifted to rid it of stones and other rough material, while its enrichment will depend entirely upon local conditions. It is important, however, that the soil of the seed-bed be in good heart, since no good results can accrue from a soil of a poor or impoverished nature. The addition of very old manure might, therefore, be necessary

a twofold advantage, as a broad-bottomed drill permits of a wider distribution of the seeds, in conjunction with a firming and levelling of the trench, not possible by the first-named processes. A lath, too, of half an inch thickness, or rather more, pressed its full depth into the soil is quite sufficient for a large number of seeds, whether of the biennial or perennial classes. In such circumstances a little finely-sifted soil must needs be added for a covering. When all are sown and each line or drill is duly labelled, a nice watering should be given from a fine-rosed watering-can.

Subsequent Treatment and Generalities.—Hot weather immediately following the sowing of the seeds makes much watering necessary, and the twain do not favour a good growth. By covering the seed-bed with scrim, tiffany, or thin sacking, excess of watering is avoided during the early weeks, while birds and other tormentors of the seed-bed are kept at bay. Seeds of such as Pansy, Wallflower, Viola, Sweet William and others of known quick vegetation might be kept together at one end of the plot for convenience and special treatment, while those of large-leaved kinds, as Hollyhocks and Canterbury Bells, should be given greater room both in and between the rows. This is of the utmost importance if the plants are to be permitted a free and full development while young, and once above ground, during August and September, considerable progress is made. Gaillardias, Coreopsis, Heucheras, Antirrhinums and Columbines,



AN EFFECTIVE GROUP OF HEUCHERAS. SEEDS MAY BE SOWN NOW.

in certain instances. If slugs are known to infest the soil, give a dressing of one of the soil fumigants now in vogue, working it in freely to about six inches deep.

Depth to Sow the Seeds.—With a finely-prepared surface soil it will be easy to draw quite shallow drills for sowing the seeds. These may be formed by a V-pointed hoe and a line, by drawing a 2-inch-wide lath or stick close to the line, or by slightly pressing into the soil a 2-inch-wide lath usually kept for the purpose by gardeners. This last has

which, with many other perennials, would be destined to remain in the seed-bed all the winter, would be best as companions, while for Polyanthuses and all the Primula tribe a cool nook should be looked for apart. The lovely scarlet-flowered *Gilia coronopifolia*, a tender biennial, is a plant for frame or greenhouse treatment; Auriculas are a choice or even good border strain would be best sown in pans or boxes; hardy Cyclamen, Anemones of the *A. blanda* and *A. hortensis* groups, with *Chionodoxa* and other tuberous or bulbous rooted

plants, should be treated in a frame, hand-light, or in the open ground in a position not likely to be disturbed for some months.

The following are some of the many kinds which may be sown at the present time. The lists make no pretence at completeness, however. The majority are available in many colour shades: Perennials.—Gaillardias, Coreopsis grandiflora, Hencheras in variety, Anriculas, Antirrhinums, Anemones (many kinds), Campanula pyramidalis, C. p. alba, Campanulas (various), Carnations, Hollyhocks, Cyclamen (hardy), Polyanthuses, Primulas, Columbines, Chionodoxa, Alstroemerias and Delphiniums. Biennials, &c.—Violas and Pansies, Canterbury Bells, Sweet Williams, Foxgloves, Brompton and other Stocks, Wallflowers, Myosotis (Forget-me-not), Cornflowers, Gilia coronopifolia, Iceland Poppies, Dianthus Heddewigii, Dianthus

Happily, however, for our gardens, the herbaceous Peony suffers but rarely, or to any great extent, from the causes named, though the Tree Peony planted in exposed situations often does. In the present circumstances, therefore, I am persuaded that the great heat and drought of last year, aided not a little by the prolonged drought of April and May of the present year, are primarily—probably absolutely—responsible for the failures one has in mind.

The herbaceous Peony is possessed of a voracious, almost insatiable, appetite, and if this in some degree is not satisfied, the work of which the plant would otherwise be capable is not done, or, at least, only imperfectly. It is too seldom recognised perhaps that, given the best cultural treatment, the Peony is a plant of giant stature—4 feet or more in height, and flowers, both in size and numbers, in proportion

the present year would have been unknown. Such failures, however, are among the teachings of the years, and as the seasons vary, so must our treatment of the plants we grow vary if all their good attributes are to be brought to light. Obvious object-lessons by the way are never lost to the observant gardener, who in his own way commits them to the brain, or to his diary, in order that he may cull therefrom as occasion demands; and the amateur, if he would succeed, must do likewise. An essential in the case, however, is an increase of knowledge concerning the plants. "He that questioneth much shall learn much" is a well-known axiom; and seeing that the Editor of THE GARDEN welcomes enquiries relating to all topics in gardening, there is no reason why every reader should not be well posted up. Culturally, at the moment there is nothing calculated to do the Peony so much good as copious waterings, varied with occasional doses of liquid manure, and there need be no half-heartedness in their application. Such waterings will strengthen and develop leaf and stem growth to an appreciable extent, and these in turn will give back to the presently forming crown-buds the fullest meed of the elaborated sap so obtained.

Hampton Hill. E. H. JENKINS.

SEASONABLE NOTES ON CARNATIONS.

Insect Attacks.—During all the years that I have grown Carnations they have never been attacked to anything approaching the same degree by green fly as this season. The sparrows, happily, left the growths severely alone, and their condition was perfect until the green fly came, and it has since been a hard task to keep the enemy in subjection. Half-a-dozen prepared washes have been tried on different plants, and in no case has there been a failure where the accompanying instructions were rigidly followed; but, unfortunately, not one would prevent a recurrence of the trouble, therefore repeated dressings were imperative to satisfaction. The old-fashioned Quassia, soft soap and paraffin solution cannot be beaten; but when such excellent washes can be purchased at reasonable prices

from advertisers in THE GARDEN, it is folly to trouble to make one's own.

Layering.—The propagation of Carnations is almost exclusively done by layering the shoots during the present month, and readers are urged to put the task in hand and carry it to completion as soon as possible. One would not suggest that it must be finished in July, but the desirability of it cannot be questioned. A plant that has had time to build up a splendid rooting system will undoubtedly stand through the winter better than one that is imperfectly rooted, irrespective of whether the winter is to be spent indoors in small pots or in the beds and borders of the open garden. The earlier the layers can be prepared and pegged down, the better will the opportunity for excellent rooting be; hence the advice to do the work quickly. No phase of propagation is really more simple than layering, but the fact that excellent judgment and considerable skill are needed cannot be disputed for one moment. If the incision that forms the



A FINE BUSH OF THE JAPANESE LILAC. (See page 356.)

chinensis, and Intermediate Stock (sow preferably in pots or pans).

PÆONIES.

If one might judge by the evidences of the failure of these plants to flower—blindness so-called—that have come to hand during recent weeks, there would appear to have been something akin to an epidemic prevailing among the Pæonies in many quarters. One correspondent, in sending a large handful of buds, says "there are hundreds like them," hence the display must of necessity have been reduced to a minimum. Now, in a general way Pæony buds are only affected by severe frosts in spring, and should these occur during the nascent period—the moment when the petals are virtually in course of formation—the result is likely to be most serious. Frosts at a later date, when the footstalks of the flower are extended and the buds are thrice as large, are less to be feared, and the worst that happens is a few damaged guard or outer petals.

Too often the plants seen in gardens are little more than one-half of this height, their thin stems and meagre growth demonstrating to the specialist that only a starvation diet has been within their reach. Years ago, when exhibiting the flowers of these plants, my specimen Pæony beds had their surfaces purposely arranged below ground-level, in order that watering to saturation point could be more easily and effectively done. The flowers I have seen this year of most double sorts—I make exception of the magnificent single Japanese grown by exhibitors—have been but little more than one-half their normal size, and the fact speaks for itself—the specialist succeeding by reason of his knowledge, by appreciation of the requirements of the subject, and by prompt application of the same. Doubtless, had the moisture-loving requirements of these plants been known and met in April and May last, when farmers and gardeners alike were suffering from an almost unprecedented spring drought, the many failures of

essential tongue is made too high up, callusing will not proceed at all satisfactorily; while if it is made too low down where the stem is more or less woody, the result will be a failure in a large proportion of, if not in all, instances. The tissues at the point of cutting should be sound and neither hard nor soft. The appliances requisite are easy of provision, since they consist of nothing beyond a knife, which must be as sharp as, or sharper than, a razor, and a supply of pins or pegs. Carnation-pins have been on the market for years (Sydenham offers one which is excellent), and the price is reasonable, or ordinary hairpins can be utilised with success; while if a supply of pegs made from the dried stems of the Bracken Fern are at command, nothing better could be desired. Given these things and a steady hand, success is bound to follow. Round each plant that is to be increased a mound of fresh soil ought to be built. A mixture of equal parts of fibrous loam and sweet, flaky leaf-mould, with a sufficient admixture of sand to keep it sweet and open, cannot be beaten for the purpose. It must be made moderately firm before starting, and then and afterwards should be maintained pleasantly moist. On varieties which make "grass" freely all weak shoots may be discarded, but in others that are not so prolific all must be retained, or there may be a shortage of stock. The stem is grasped firmly in the left hand and raised slightly. Then remove a few of the lowest leaves, and with the sharp knife make a cut from beneath running upwards through a joint for approximately 1 inch, and the necessary tongue with a clean wound will be formed. To insert this, the tip of the shoot is lifted at about right angles to its base to open the incision widely, and in that position it is secured, pegged down to the soil of the mound; covering with a little soil completes the operation. A light soil containing sand and sifted leaf-mould is preferred. It is the custom of some cultivators to put a small stone or a piece of stick in the incision to prevent closing, but when reasonable care is exercised in pegging down this is neither necessary nor desirable. The details in regard to every shoot are identical, and no one need fear that the result will be a failure if the simple instructions given are followed.

F. R.

THE TREE FLAX.

(LINUM ARBOREUM.)

This is a free-flowering dwarf shrub for a warm, sunny border and the rock garden. It requires a light, well-drained soil, for which reason, when preparing the ground previous to planting in some gardens, the plants are more likely to succeed if a quantity of old mortar rubble be worked in. In open and rather exposed positions the Tree Flax, being a little tender, is liable to damage in winter.



WISTARIA MULTIJUGA IN A BERKSHIRE GARDEN.

The plants in such positions may be afforded protection with a few Yew or Spruce branches during severe weather. Cuttings made of the young shoots during July and August root fairly easily in a slightly heated propagating-frame or gentle hot-bed. The flowering season is May and June. The flowers are yellow and produced in great profusion. Even on a poor stony soil it is quite a success. *Linum arboreum* a native of Crete, was introduced in 1788 and grows 9 inches to 1 foot in height.

TREES AND SHRUBS.

A BEAUTIFUL WISTARIA.

SEND you a photograph of the beautiful *Wistaria multijuga*, growing here in the garden of Captain F. G. Coleridge, who planted it about forty years ago at the base of a Spruce Fir, which it has taken sole possession of, there being only one branch of live wood left in the tree. Of *Wistarias* I think this to be the most beautiful. When once it starts to bloom, every small shoot produces from three to six racemes of delightful sweet-scented flowers, many of these racemes exceeding three feet in length, with as many as 160 individual flowers, and often more; the longest raceme I measured this year was 38½ inches. Where the plant can be grown in this way a most charming and effective display is produced. Last year, owing, no doubt, to the very hot season, a large number of seedpods were produced, some containing one seed and some two seeds, many of which ripened, and from which we have raised several plants. Although seed-pods are generally produced every year, it is very seldom that they ripen, as they are usually destroyed by early frost.

W. H. SCOTT.

Twyford, Berks.

BERBERIS CANDIDULA.

This dwarf-growing Barberry may occasionally be met with under the name of *B. wallichiana* var. *pallida*, though it is a rare plant and one which has only been grown during the last few years. It forms a low-growing shrub of dense habit, with stiff branches clothed with ovate evergreen leaves, the largest of which are rather less than an inch in length. Several are borne together from every bud, and at the base of each leaf cluster three strong spines are produced, each one being quite a third of an inch long. The leaves are dark green, glossy above and silvery beneath. The apex is terminated with a short spine. The yellow flowers are usually borne singly from the leaf-axils. They are large for Barberry flowers, and showy. It is a plant which might well be planted on a rock garden, or it is suitable for planting in a bed on the margin of a lawn where a shrub

9 inches to 1 foot high is required. It may be raised from seeds or from cuttings taken late in the summer. *B. candidula* is a native of Bhotan, but the same plant appears to have been received from China.

THE JAPANESE LILAC.

(*SYRINGA JAPONICA*.)

This is a very distinct and handsome shrub, native of Japan. The average height of a mature bush is from 7 feet to 10 feet, the spread of the bush being about the same as the height. The specimen shown on page 354 is twenty-five years old. The panicles, which average 8 inches to 9 inches in length, are so densely flowered as to appear almost like plumes. The colour is creamy white, fragrant, but not so pleasing as the common Lilac. The season of flowering is from mid-June onwards to mid-July, thus being a particularly valuable shrub, for by this date

stature and the stage of blossom development, but all alike are in perfect health, and full of promise of the hountiful seed crop that is so much desired not only by the proprietors of the business, but also by their most capable and experienced manager, Mr. Andrew Ireland.

To examine each plant in an area of ten acres is no light task, and I am not going to pretend that I did it, but I was forced by Mr. Cuthbertson, the principal of Messrs. Dobbie's, and Mr. Ireland to do my duty to a reasonable degree, so that it is safe to assert that I saw anything from five to eight acres in detail. I sought diligently for traces of "streak," because I felt that if it was in evidence where an acknowledged expert was in control, some of my readers would feel an element of satisfaction. I failed to find it, and Mr. Ireland was on the contemptuous side when I spoke of it. His idea appears to be that when plants are rationally grown, no "streak" or other trouble will arise,



LINUM ARBOREUM, A DWARF SHRUBBY PLANT FOR THE ROCK GARDEN OR SUNNY BORDER. (See page 355.)

a goodly proportion of the beautiful trees and shrubs of our gardens are past.

NURSERY NOTES.

SWEET PEAS AT MARK'S TEY.

THESE are many beautiful displays in the fields and gardens of all the counties of England at the present time, but after visiting Messrs. Dobbie and Co.'s seed farms at Mark's Tey and seeing the ten acres of Sweet Peas, almost all in full glory, it does not seem that there possibly could be any sight more delightful. Hundreds of thousands of magnificent plants are accommodated in thousands of yards of land, and among them may be seen those fast-setting seeds and others that have not yet reached their zenith of prolific flowering. There are plants from seeds sown out of doors in the autumn, others from seeds sown in cold frames at the same time, and still others from seeds sown in the spring, and they differ materially in

and I am firmly of the same opinion. The Sweet Peas at Mark's Tey are magnificently grown, but they are in no sense overfed, nor do they have anything beyond natural manures, and no trace of disease of any kind could be seen in the place.

Naturally enough, the principal part of the space is allocated to the choicest varieties grown expressly for the production of seed, but there are many rows devoted to novelties of the firm's own raising and not yet in commerce, as well as to introductions from other seed houses at home and abroad. The whole of these varied considerably in merit, and probably the majority of them will never be seen again; but the trueness of the British strains was far in advance of that of the imported seeds. Several of Mr. Cuthbertson's own crosses demonstrated the careful manner of working, since all the seedlings of the first generation were identical, and Mr. Ireland had sown the seeds in the precise order in which they formed in the pods.

The Editor says that I must cut my notes short, and editors are stricter martinetts than any soldier

who has yet been born. When the rule to cut down applies to other scribes I do not worry, but when I am forced to observe it myself I think it wrong, and in the present instance I am sure that all Sweet Pea readers of THE GARDEN will agree with me. I wanted to mention half-a-hundred meritorious varieties, but space forbids. The Marquis, true, is splendid, and Stirling Stent with a little more vigour would take some beating as a garden Sweet Pea. The two ladies—Mrs. Cuthbertson and Mrs. Andrew Ireland—are absolutely indispensable in the garden, precisely as they are in their respective homes. Sunproof, Crimson and Dobbie's Scarlet lend that richness which is so desirable, while Lavender George Herbert and Mauve Queen afford the opportunity for choosing the one that suits the purse the better. Brunette all will grow, because it is perfectly distinct, and none will fail to admire Duplex, Mrs. Hugh Dickson, Edrom Beauty, Lady Miller, Elfrida Pearson, Thomas Stevenson, Dobbie's Cream, John Ingman, Nora Unwin and Etta Dyke. I could easily mention others just as desirable in their way, but I must obey the order to stop. HORACE I WRIGHT.

THE FRUIT GARDEN.

WORK AMONG THE STRAWBERRIES.

AS soon as the plants have been cleared of their fruits, no time should be wasted in getting all the old, useless leaves, and runners if not required for stock, removed, so that the new growth and crowns for the production of a good crop of fruit next season may have ample time to develop. If the plants are in the least infested with red spider or mildew, give them a thorough dressing with Abol or some other safe insecticide, after which slightly loosen the surface between the rows and follow with a good mulching of thoroughly-decayed manure. This method I have now practised for many years, and am well satisfied with the results, especially where the soil is light and porous. Deep, rich soil of a somewhat heavy texture should be sparingly manured, otherwise the plants may grow too much foliage and prove less fruitful.

The Best Varieties.—Our first variety to ripen in the open this year was Royal Sovereign. We gathered our first dish about June 1 from young plants layered last July, and from two year old plants about nine days later. We have for many years depended almost entirely on this variety, both for pot culture and early supplies outside, and it is, I consider, for those purposes the very best to grow. Leader, with me, although a heavy cropper, does not do so well as several others, and the fruits are too soft and coarse on our light land. President and Sir Joseph Paxton succeed very well, and Laxton's Latest, Reward, Givon's Late Prolific and Waterloo serve us well late in most seasons.

Forced Plants.—Those who intend to plant out old plants that have been forced, with the hope of securing a good crop next year, should get them out without delay into good, deeply-cultivated land. Fully 2 feet apart between the rows must be allowed, and the soil about the roots should be made firm. If the land is already prepared, all that will now be necessary is to hoe and rake it over, stretch out the line, and plant firmly. The roots should be thoroughly moistened before turning them out of the pots.

H. MARKHAM.

Wrotham Park Gardens, Barnet.

GARDENING FOR BEGINNERS.

THE SUMMER PRUNING OF FRUIT TREES.

A GENERATION ago the summer pruning of hardy fruit trees was not carried out so extensively as it is at the present time. Winter pruning was then mainly depended upon, but cultivators now know the value of summer pruning.

It does not entirely obviate the necessity for winter pruning, but it lessens the work then and has other essential advantages. For instance, in our country we sometimes fail to get a very sunny summer; and the young wood does not mature. The timely removal of surplus growths admits light and air to the basal buds and leaves retained, and the fruit growing on the trees gets much benefit, too, the crop being heavier than when summer pruning is not done. A healthy fruit tree will make a great deal of young wood during the summer months. This is natural, and in due course the tree will become fairly fruitful, even if it does not receive any pruning at all; but the specimen would grow into a large one, and, besides being of bad shape, it would probably be quite inconvenient to have it in a small garden. In a restricted area few untrained, unpruned trees could be grown. The centre would be choked with useless wood, and the fruits matured would be on the outside branches only. In many of our old orchards such trees are to be seen in these days; but we wish to advance in the art of fruit culture, and in doing so summer pruning of the young wood is now carried out, with marked success.

By summer pruning we restrict the size of the tree and divert the nourishment of the specimen to the buds, main leaves and fruit. Judiciously done, this pruning not only prevents any waste of the strength of the tree, but helps to prepare it to produce and mature a good crop of fruit the following year.



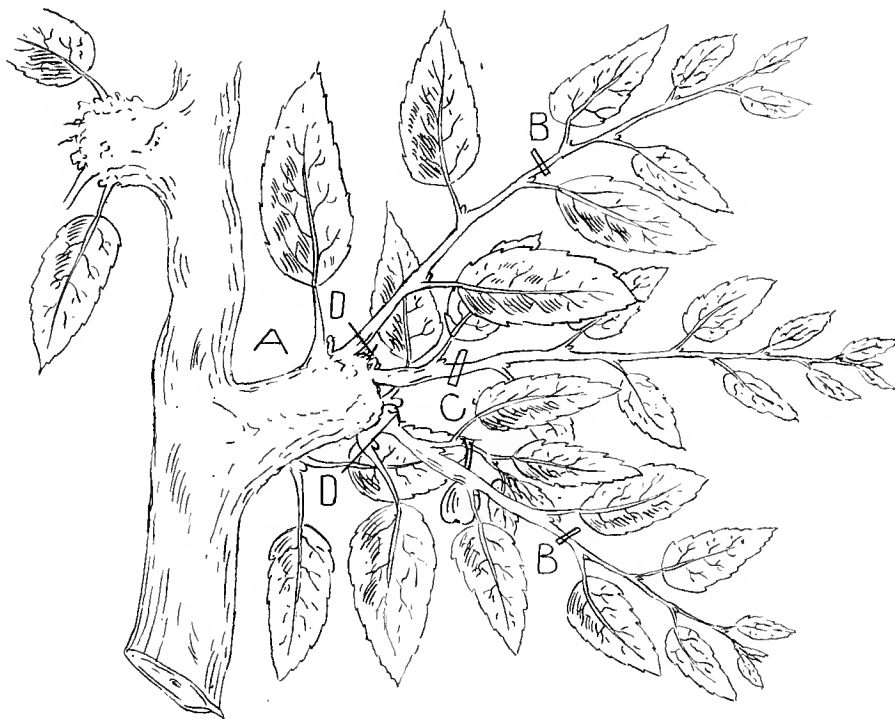
1.—YOUNG FRUIT-BEARING SHOOTS THAT SHOULD BE PRUNED NOW.

The Illustrations Explained.—The principle of summer pruning is the same whether applied to young extended branches or to those growing on old spurs. I will refer to the former first. A shows a young branch with side shoots. During the

latter part of July and the early days of August the side shoots (B B B) must be cut back as denoted by the cross lines on each one. Three or four main leaves and buds must be left on the basal portion of the branch. In a very short time strong trees will produce lateral shoots, as shown by the dotted lines, C C C. When these small laterals are about one inch long they must be pinched out, as shown at D D D. The basal buds, denoted by E, will not burst into growth, but they will become very plump, and this is just what the cultivator wants. Probably a few sublaterals will grow again at D D D; if so, they must be pinched out when large enough to handle. In winter the shortened shoot is pruned to the basal buds on it. The leading branch (F) must not be shortened.

The second illustration shows how to deal with the young shoots growing on an old spur. A, spur and thick branch; B B, two strong young shoots, which must be cut back at the dark cross lines; C, a weaker shoot, which should be cut back almost to the spur itself to prevent overcrowding. Now, any buds left on the short stump of this shoot will grow again at once, and they must be pinched out; their growing does not matter, as the buds on the old spur, denoted by the arrows D D, will swell up well and produce flowers and fruits next year. Beginners should attend to the summer pruning of their fruit trees, particularly Apples and Pears, without much delay. By carrying out this work thoughtfully a good deal of hard pruning in the winter may be saved, with advantage to the trees. By the removal of surplus growths now, light and air will be admitted into the trees, with beneficent results. The winter pruning of the other shoots must be done in the usual way; then the old spurs will become very fruitful.

G. G.



2.—THE SUMMER PRUNING OF YOUNG SHOOTS GROWING ON AN OLD SPUR.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Border Chrysanthemums.—Keep the soil well aerated between the plants and well water them at the roots. During showery weather give a dusting of soot to the foliage and the surface soil, and a little artificial fertiliser hoed into the surface will prove helpful. Staking and tying must be proceeded with, and if the points of the growths become infested with aphid, either dust the affected parts with Tobacco powder or syringe with an insecticide. A damping of the foliage on warm, dry evenings will greatly assist growth.

Anchusas.—The varieties of this hardy herbaceous plant have been creating a brilliant display. It is one of the finest plants for the herbaceous borders and seems to stand drought, a most important point, especially in gardens where the soil is light and porous. Young plants that were raised from cuttings and are well established may be planted out, and will make fine plants for flowering next season.

The Kitchen Garden.

Spring Cabbage.—Between this date and the end of the month make a first sowing of good varieties for spring use. Select a border or piece of ground that has had no manure recently applied, and prepare a fine tilth. Sow the seed thinly and evenly broadcast and rake in. Stretch a net over the seed-bed, or probably birds will be a nuisance. If the prevailing weather is dry, water with a roset can in the evening.

Coleworts.—Make a sowing for late autumn and early winter supplies in the open ground as advised for the above, bearing in mind not to let it follow any of the Brassica family.

Carrots.—Keep the main crop of Carrots of the intermediate kinds intended for lifting for winter supplies well hoed. If the crop appears too thick, the young roots, if carefully pulled, will be useful for culinary purposes. During spells of drought, water should be liberally given if possible, and the crop mulched. Make another sowing of a quick-maturing variety for use later on.

Parsley.—Make a small sowing in the open ground in drills for providing plants for winter use.

Vegetable Marrows.—Keep the plants well supplied with water, and a good soaking at intervals with liquid manure-water to plants that are growing and fruiting freely will be of great advantage. The growths should be regulated and stopped, and the fruits as soon as large enough should be cut, as if the stalks are placed in shallow water they will keep young and fresh for a considerable length of time.

Plants Under Glass.

Malmaison Carnations.—The time has now arrived for propagating these old-time favourite flowers, which is carried out by layering. The best method is to devote a light or two of a cold frame, containing some fairly suitable soil of a sandy nature, for the purpose. Knock the old plants out of their pots, take out a little trench in which to lay the old balls of soil, and spread out the growths evenly for layering, when with a little careful manipulation the whole surface of the frame can be covered with growths. Use a sharp knife, and cut through a joint on the under side and towards the top of the growth. Just cover the growth where the incision is made with some of the fine soil and peg down. Keep close and shaded for a week or so, and damp over with the syringe; then gradually increase the amount of ventilation until the lights may be removed entirely.

Tuberous Begonias.—These are making a grand show in the houses just at present. Remove faded flowers to keep the plants neat in appearance, and support the flowers with neat sticks. See that the plants do not suffer for the want of water, and give them assistance once or twice a week with liquid manure-water.

Fruits Under Glass.

Peaches and Nectarines.—To retard their ripening, if it is convenient to do so, the trees may be shaded by whitewashing the glass or placing mats or other material over them during the daytime, though it can scarcely be expected that the flavour will be as good.

Strawberries.—When the newly-layered plants have rooted through to the sides of the pots, they should be severed from the parent plants and allowed to remain for a few days on the beds, when they can be removed to the nearest open site to where they will be potted. This should be carried out before the young plants become pot-bound. Use clean, well-drained 6-inch pots. Put a layer of rough turfy material over the crocks. Use a compost consisting mainly of fibrous loam, with the addition of one-third flaky leaf-mould or thereabouts, according to the nature of the loam, with a sprinkling of soot and wood-ashes and a liberal dash of silver or road sand. Make sure before potting that the ball of soil is well moistened through. Pot firmly, and leave quite an inch margin for watering. Give a good soaking in and stand on a firm bottom, as it is absolutely necessary to keep the plants free from worms.

The Hardy Fruit Garden.

Strawberries.—If it is intended to make new plantations—and it is advisable in gardens of fair dimensions to lay one down each year—a supply of plants should be layered into small pots as recommended for forcing, and, as soon as the ground is ready, the plants can be put out and will become well established before winter. It is a capital practice to plant out in threes triangularly, allowing plenty of space between the clumps and rows.

Summer Pruning.—If not done too early, it is an excellent plan to shorten back the current season's growth on wall fruits, such as Apples and Pears, to within five or six buds of the base, as not only does this make the trees more attractive, but does much to lessen aphid, renders the trees less susceptible to further attacks of blight, and exposes the fruits to the sun and air, as well as concentrating more energy into next year's fruit-buds. If done too early, however, it encourages lateral growth, which must, of course, have a weakening effect.

Watering.—Every available opportunity should be secured now to apply water and stimulants to swelling crops of fruit. Even where these are minus, the trees will greatly benefit, and should not be neglected. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Roses.—The season is now on, and much labour will be necessary in removing decaying flowers, which, if time permits, should be done systematically daily.

Delphiniums.—As the flowers give place to seed-vessels on the spikes, remove these at once, which will be a means to keep the foliage of the plants green and slightly for a long time; seeding, on the other hand, soon makes it rusty and an eyesore.

Pæonies.—As these go out of flower, very large plants, which are apt to throw few blooms, may be lifted, the roots soaked in water as a means of freeing them from soil, the plants thereafter divided and immediately replanted, and the stems and foliage supported on stakes. Apply water till the plants become established.

Carnations.—Proceed with layering shoots of border varieties, selecting the best for the purpose. It is quite a usual thing to find the workman, when fresh material is used for rooting into, place it not where the roots will be produced, but above the part into which the tongue of the layer is pegged. Some varieties are very apt to break away from the main stem when putting them down. This is easily prevented by twisting round the shoot to be layered, when, unless the operator is exceedingly clumsy, there will be none thus treated break off.

The Grass.—Now that the flower garden is again becoming bright with flowers, extra care should be taken that grass along the sides of walls, at the base of pedestals and beneath specimen shrubs is not allowed to stand untrimmed and longer than the grass on the lawns. Walk and border edgings are equally unsightly, and should never be allowed to grow much, but be clipped at short intervals.

The Shrubbery.

Prunings.—Common Laurels are usually very ragged and unkempt at this time of year, and if time permits or the weather is unsuitable for other operations, they may have the stronger shoots

cut back, leaving all the short ones, so that no appearance of their having been pruned may be evidenced. Nothing excels a knife for this purpose, though there are many ingenious instruments to be had by those who dislike an ordinary knife.

Weigelas.—Now that these have done flowering, the shoots may be shortened to allow the growths for next year to grow freely, and be well exposed so as to ripen thoroughly. The many beautiful species and varieties of Weigela seem to be hardly known, yet there is nearly every shade of colour from cream to darkest crimson with white, and with foliage variegated in white and yellow.

Clematises.—The late-flowering varieties will need constant attention to secure the fast-growing shoots and to keep them from getting irretrievably entangled. The pretty little *C. Flammula* is best trained so that its shoots droop, and these will merely need to be occasionally directed so that they do not grow into bunches.

The Hardy Fruit Garden.

Red Currants.—The shoots of these may be cut back previous to netting them.

Raspberries.—Any superfluous growths should be removed previous to putting on nets, and very strong shoots at the same time slung to the wires or other supports to keep them from sagging.

Apples.—Though as a crop Apples are light, there are always varieties which set more fruits than is good for the trees to mature. The thinning of such may now be proceeded with, leaving soft, early varieties, such as Early Julian, Lord Grosvenor and Codlins generally, till the fruits are large enough for culinary purposes, when thinning may be proceeded with by degrees.

Loganberries.—If trained on rough trellises, lay in as many shoots of the current year as will replace those in bearing. It is not always the most robust shoots of this fruit that give the largest crop, therefore extra strong ones may be cut out and those of medium strength only retained. If trained to stakes the shoots must be slung loosely to them in the meantime, and side growths from the fruiting canes shortened considerably.

The Vegetable Garden.

Cabbage.—This is the most suitable time for sowing for the early spring and main early summer crop. It is preferable to sow the seeds broadcast and thin rather than in drills. Those who are inexperienced should coat the seeds with dry whitening, which enables one to gauge exactly the closeness of the seeds.

Broccoli.—These and other winter crops of a like nature will be benefited by having some earth drawn to the plants on each side and, if the soil is at all hard, somewhat loosened on the surface. Cauliflowers may require water at the root and a surface-dressing of a stimulating manure, but not Broccoli nor Brussels Sprouts, at least in the meantime.

Spinach.—A larger sowing than usual may be sown now or shortly. If the seeds are sufficiently thin in the rows, the plants will stand a long time once the cooler nights begin in August. If sown after Potatoes, the surface of the soil will merely need to be well broken up with a fork and the seeds sown forthwith. Spinach does best in not too firm a soil.

The Plant-Houses.

Auriculas.—This is a suitable time to repot all kinds. Old plants should have the soil shaken from the roots, and these be dipped in an insecticide should the white root aphid be present. The decayed part of the rootstock removed and the plants repotted in pots of the same size. Young plants in small pots need only be shifted into others of a larger size.

Humeas.—All seedlings as soon as they are large enough to handle should be transferred from the seed receptacles to cutting-boxes or 6-inch pots. They need not be more than 1 inch apart. The young plants progress much better when transplanted as thus advised than if left in the seed-pots till they become larger.

Freesias.—The earliest batch may now or soon be potted. They succeed very well in 5-inch pots, twenty or so in each, and if too contracted for all the corns to be placed on a level, a portion may be placed slightly deeper. Stand the furnished pots in a cold frame, but allow them to be exposed to all kinds of weather in the meantime.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Polypodium mandaianum.—In brief, this lovely and handsome Fern may be described as a glorified *P. aureum*, having fronds 4 feet to 6 feet in length, proportionately broad, and of a deep glaucous green, whose gracefully-arching, deeply-laciniated pinnæ are almost suggestive of a plumose character. This magnificent novelty was in splendid form at the recent International Exhibition, when, as now, it was exhibited by Mr. W. A. Manda, South Orange, New York, U.S.A. It is a noble Fern and a great acquisition.

Lilium warleyense.—A gloriously beautiful and new Lily, with rich scarlet-coloured flowers, from China. These are in great numbers on the plant, and if quite representative of the new-comer, every hardy plant gardener will require it. The leaves are narrow, linear and long, not unlike those of *L. myriophyllum*, the drooping petioles suggesting those of *L. suchuenense*. A remarkable plant of great merit. From Miss Willmott, Warley Place, Essex.

Lastrea patens Mayii.—A hybrid raised between *L. patens* and *L. lepida*, having the pale green-coloured fronds of the first. The fronds are grooved, much dissected, and of considerable length, making up a highly ornamental plant. From Messrs. H. B. May and Sons, Edmonton.

Miltonia hycana Le Conquerant.—Pale rose sepals and petals, and an almost white lip with a crimson patch in the centre. Shown by M. Jules Hye de Crom.

Cattleya Artemis.—This is a fine hybrid derived from the intercrossing of *C. Iris* and *C. gaskelliana*. The sepals and petals are a light mauve, which are slightly reflexed, but the open and broad lip is a purplish magenta, with a large band of yellow in the throat. Exhibited by Lieutenant-Colonel Sir G. Holford.

Cattleya dupreana Schröder's variety.—A superb *Cattleya* having well-formed flowers, the sepals and petals being a pleasing shade of rose, while the gorgeous lip is purplish crimson. From Baron Bruno Schröder, Egham.

AWARDS OF MERIT.

Carnation Jean Douglas.—A superb scarlet of dazzling colour, whose shapely and large petals will doubtless render it a splendid exhibition variety. The flowers are supported on stout, erect stems.

Carnation John Ridd.—Yellow-ground fancy, suffused and marked with rosy red. It is regarded as one of the best fancy sorts in existence. Both came from Mr. James Douglas, Great Bookham, Surrey.

Clematis Lady Betty Balfour.—A very showy variety, whose flowers are of purplish hue. From Messrs. George Jackman and Sons, Woking.

Astilbe Avalanche.—The fine pyramids of blossom are nearly pure white; under stress of forcing they would doubtless be quite so. Shown by M. G. van Waveren, Holland.

Nephrolepis exaltata Rochfordii.—An exceptionally dwarf variety of this variable species, with plumose fronds of an almost moss-like density. In plumose varieties it would appear to represent about the last word. Exhibited by Messrs. T. Rochford and Sons, Limited, Broxbourne, Herts.

Begonia Mrs. Robert Morton.—A splendid variety of the tuberous-rooted section, of a rich,

clear golden yellow colour. The flowers are of great size and perfect form.

Begonia Florence Nightingale.—Another superb novelty, with flowers of the purest white. Both were exhibited by Messrs. Blackmore and Langdon, Bath.

Rose Ethel.—A rambler or climbing variety, with a great wealth of single, clear pink-coloured flowers. From Mr. Charles Turner, Royal Nurseries, Slough.

Rose Mrs. Charles S. Hunting.—A Hybrid Tea variety, in which pink and cream colour are in delightful harmony. Exhibited by Messrs. Hugh Dickson, Limited, Royal Nurseries, Belfast.

Brasso-Cattleya Marion.—The parentage of this pretty Orchid is unknown, but the flowers are of good shape. The colour is a light heliotrope, the lip being slightly fringed and deep mauve, with a darker streak down the centre. Shown by Messrs. J. Veitch and Sons, Limited, Chelsea.

Cattleya thurgoodiana Apollo.—Sepals and petals magenta, and a rich purplish crimson lip, which has a blotch of yellow on either side similar to the well-known *Cattleya gigas*. From Messrs. Stuart Low and Co., Enfield.

Lælio-Cattleya rubens The Kaiser.—A pleasing form of this popular hybrid, being richer in colour than the type. Exhibited by E. H. Davidson, Esq., Twyford.

Odontoglossum percultum King George V.—The flowers are large, and have a whitish ground blotched and marked with bluish purple. From F. M. Ogilvie, Esq., The Shrubbery, Oxford.

The foregoing were shown before the Royal Horticultural Society at the Holland Park Show.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

WOUNDED POPPIES (H. M.).—An insect, apparently a minute two-winged fly, has laid her eggs in the stem of the Poppy. You will find the larvæ which have hatched from them in the wounded parts. The life-history of this insect is unknown, and it does not appear to be common. Probably the enclosure of any specially-desired buds with muslin would save them. The attacked buds should be burned.

VIOLETS WITH HIDDEN FLOWERS (C. T.).—The ordinary flowers of the Sweet Violet very rarely produce seed. The seed is produced in small flowers, like those you send, and known as cleistogamous flowers, from the fact that they never open. They are somewhat dependent upon the conditions around the plant for their formation, and possibly, if the Violet were transplanted to other quarters, it would produce flowers, though it may possibly be that the plant in question has lost the faculty of ordinary flower production altogether. The cleistogamous flowers are borne after the ordinary ones are all done.

INJURY TO PHLOXES (H. A.).—The Phloxes are badly attacked by the stem eelworm. The rolling of the leaves and the malformation of the stem have been brought about by these pests, and they are likely, unfortunately, to be carried on to other years. The tissues are filled with eggs,

and so all diseased parts should be removed as soon as possible and burned, not consigned to the rubbish-heap. Propagation should only be done from healthy plants; and as the pest exists in the soil and gains entrance into the plants from the soil, the latter should have a dressing of sulphate of potash at the rate of at least 1 lb. to each 20 square yards, and double that quantity may be used.

THE GREENHOUSE.

PITCHER PLANTS (Ladona).—Whether you take the plants out altogether from their Teak baskets will depend upon the condition the roots are in. If they are in good condition it would perhaps be as well to remove as much of the old soil as possible without unduly disturbing the roots, and replace it by some fresh compost made up of fibrous peat, sphagnum moss, silver sand and nodules of charcoal. Whether the plants need re-basking can only be known by personal inspection, but if in your opinion this had better be done, the same compost as above recommended will be suitable. If you have a propagating-case in the stove with bottom-heat, the tops of the plants that are cut off may be put in as cuttings.

GLOXINIAS (X. Y.).—There were a few thrips on the leaves sent, but the major portion of the injury seemed to be caused by that destructive little mite usually referred to as the *Begonia mite*, from its having been first noticed on these plants. Its ravages, however, are greatly on the increase, for we have had numerous examples of injury done by it on different plants during the present season. Probably the hot, dry summer of last year had something to do with this, for heat and drought are very favourable to the increase of this pest. From its exceedingly minute character, this mite often does a deal of damage before its presence is suspected. Vaporising with the XL All Vaporiser at intervals of a few days, or dipping the plants in some nicotine solution, will effect a cure; but in your case the mischief is already done. While too dry an atmosphere is injurious to Gloxinias, we do not recommend daily syringing, though in very dry weather it is beneficial. Rather than too much syringing it is better to maintain a certain amount of humidity by damping the stages on which the plants are stood.

FRUIT GARDEN.

RASPBERRIES ON ARCHES (J. B.).—On rich, deep soil some of the strong-growing varieties of Raspberries, such as *Superlative* and *Norwich Wonder*, will give a cane-growth of from 6 feet to 7 feet in a season; but grown on ordinary garden land they cannot be depended on to grow high enough to cover arches, like the *Loganberry* vine. Why not arches of Blackberries? These make a cane-growth of from 10 feet to 15 feet in ordinary seasons on good land. They seldom fail to give a good crop of useful, indeed, delicious fruit when quite ripe every autumn. The Parsley-leaved variety is the best.

SUMMER PRUNING FRUIT TREES (J. I. O.).—This consists in pinching all the shoots the tree makes (excepting the main leading shoots) at the fifth leaf (understand, every shoot, including all side shoots). From the shoots so stopped other young shoots will issue in due course. All these must also be pinched back, at the third leaf this time, and every subsequent growth these shoots may make in the course of the season must be pinched back at the third shoot in the same way; some of the shoots will probably have to be stopped three times. See "Gardening for Beginners" in this issue.

MISCELLANEOUS.

AUSTRALIAN PEPPER (T. B. F.).—We have not been able to find out what is meant by Australian pepper. The native Pepper Plant of Australia is *Piper Novæ Hollandiæ*, but whether Australian pepper is the product of that plant we are not able to say, neither do we know whether one pepper would be any more effective than another for the purpose for which you require it. It is probable that Cayenne pepper sprinkled about would drive the dogs away. By calling at your nearest drug store you could probably find out whether Australian pepper is still in commerce, or the chemist in charge might be able to recommend something suitable for the purpose. In the meantime a little wholesome correction to the dogs might have the desired effect.

NAMES OF PLANTS.—*Solent.*—Poison Ivy (*Rhus Toxicodendron*). It is a dangerous plant to grow, for if handled by some people it causes a form of blood-poisoning. —*Lieutenant-Colonel Prestbury.*—*Genista tinctoria.*—*Lewis.*—*Sedum Sieboldii.* The blue-flowered plant is a form of *Campanula gargarica.*—*A. S.-1.* *Lilium giganteum*—you are to be congratulated upon flowering this beautiful Lily; 2, *Eucomis punctata*, a South African liliaceous plant.—*C. E.-1.* *Geranium pratense*; 2, *Veronica longifolia alba*; 3, *Thalictrum glaucum*; 4, *Centranthus ruber (Red Valerian)*; 5, *Nepeta Mussinii*; 6, *Anaphalis Margaritacea.*—*Payd.*—1, *Taxus baccata pendula*; 2, *Helichrysum (Gnaphalium) lanatum*; 3, too small to name; 4, a *Labiata*, not sufficient material to name; 5, *Veronica meisa*; 6, *Epilobium nummularifolium.*—*W. C. S.*—*Malmesion Carnation Princess of Wales.*—*S. C. R.*—*Nepeta Mussinii.*—*Orchid.*—1, *Orchis maculata*; 2, *Thalictrum aquilegifolium*; 3, *Glyceria aquatica variegata*—it grows about three feet or more.—*M. G.*—*Coleuses*: 1, *Edith Sentence*; 2, *Diana*; 3, *Fantasy*; 4, *Gem*; the *Fuchsia* is *Gertrude Pearson*, and the Fern *Nephrolepis exaltata.*—*Lewis.*—*Viscountess Folkestone.*—*Many Years' Reader.*—1, *Mrs. E. Mawley*; 2, *Warrior* or *General Schablinski.*—*John Hopper.*—*Jules Margottin.*—*An Amateur.*—We believe the *Rose* to be the variety *Mme. Audot*, one of the very old tribe of *Rosa alba*.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY'S SUMMER SHOW.

(Continued from last week.)

SWEET PEAS.

Messrs. Carter and Co., Raynes Park, erected a beautiful triumphal arch of Sweet Peas, and, with a raised platform as a base, this subject was seen to advantage. The quality of the flowers was very good indeed, and the grouping was exceedingly pretty. Among some of the better things were Masterpiece, Mrs. Routzahn, Mrs. C. W. Breadmore, Queen of Norway, Marie Corelli, Elsie Herbert, T. Stevenson, Prince George, Mrs. Cuthbertson, May Campbell and Elfrida Pearson. This was a fine effort.

A splendid table group of Sweet Peas was shown by Mr. W. E. Alsen, Denmead, Hauts. Good colour and capital quality were conspicuous, although the bunches might with advantage have been more lightly arranged. Mrs. H. Sykes, Melba, Stirling Stent, Mrs. H. Dickson, Evelyn Hemus, A. A. Fabus and Winsome were the better sorts.

A dainty lot of Sweet Peas was staged by Messrs. H. Cannell and Sons, Swanley. This group included most of the newer and better varieties, and the flowers were attractively set up.

Messrs. Sutton and Sons, Reading, made a very wonderful exhibit of Sweet Peas, representing about one hundred and twenty bunches, set up in most attractive fashion. About seventy-two feet frontage was occupied by this very handsome exhibit, and all that was worth growing in Sweet Peas was seen here. A background of velvet, with arches

Mary (blue), Breadmore's Frilled Cream (cream), Audrey Crier and Elsie Herbert, all in excellent form and condition.

A number of vases of the better Sweet Peas were set up in the group of hardy flowers arranged by Messrs. Kelway, Langport. The flowers were large and well grown, and the varieties up-to-date. Miriam Beaver was very fine.

A particularly charming group of Sweet Peas came from Messrs. E. W. King and Co., Coggeshall, Essex. The blossoms were most attractively displayed, and the flowers were fresh, clean and highly coloured. Anglian Lavender, Elsie Herbert, Mrs. W. King, Gladys Burt, Nubian, Anglian Pink, Nettie Jenkins, Constance Oliver and Anglian Fairy were beautifully shown.

A pretty collection of Sweet Peas was staged by Messrs. S. Bide and Sons, Farham, Surrey. Baskets, artistic vases and a variety of receptacles were utilised to display these dainty flowers to advantage. Bertha Massey, Queen of Norway, Florence Nightingale, Edna Harland and R. F. Felton were among the good things in this group.

A small group of Sweet Peas was shown by Mr. W. J. Godfrey, Exmouth. The flowers were fresh and clean, and up-to-date varieties were shown. May Campbell, Mrs. Townsend, Masterpiece, Elfrida Pearson and Juliet were the better varieties.

A very large collection of high-quality flowers was shown by Sir Randolph L. Baker, Bart, M.P., Ranston, Blandford. Remarkably fine were the blooms, and they were shown in wonderful variety. They might very easily have been more effectively set up; there was too much blank space at the back of the group. Mrs. Cuthbertson, Eric Harvey, Dorothy, Princess Victoria, Doris Usher, Audrey Crier, Lavender George Herbert, T. Stevenson and Mrs. W. J.

Enchantress, White Perfection, Scarlet Glow (grand colour), Mrs. T. W. Lawson, Enchantress, Beacon, Governor Roosevelt, Mrs. W. C. Ward, Melody, Cardinal and a very promising fancy shown under the name of Seedling No. 1. Messrs. Stuart Low and Co., Enfield, set up a fine exhibit of Carnations in the manner peculiar to this firm. With appropriate foliage the effect was good. Of the Malmaisons, Old Blush, Irene, Lady Mary Hope, Lady Coventry, Calypso, Sault, Princess of Wales and Martin R. Smith were first-rate. There were some fine vases of the Perpetual-flowering Baroness de Brien (a beautiful blush pink sort).

Messrs. W. Wells and Co., Limited, Merstham, Surrey, showed Carnations in their group of miscellaneous plants. White House, Lady Algy, Dorothy Gordon, R. F. Felton and Scarlet Glow were seen in good form.

Mr. J. D. Webster, Chichester, had a small group of Carnations in pleasing variety. Lady Wolverton was noteworthy.

A pretty group, arranged on the ground, was set up by Messrs. John Peed and Son, West Norwood, S.E. The arrangement might have been vastly improved, but the flowers were fresh, clean and of good quality.

Carnations were nicely shown by Mr. H. Lakeman, Thornton Heath, Surrey. Miss Willmott, Thomas & Becket, Lieutenant Shackleton, Lady Hermione, Amy Robsart, Leslie and several well-known Perpetual-flowering kinds were in evidence.

A splendid bank of Malmaison Carnations was put up by Mr. W. M. Gott, Trenythron, Par Station, Cornwall. They were a fine lot, and included, among others, Princess of Wales, Madge Hodgson, Mrs. Trelawney, The Queen and Monk.

Carnations were also set up in another comprehensive group by Messrs. R. H. Bath, Limited, Wisbech. They were all border sorts, and were a beautiful series. Nene Beauty, Safrano, Unique, Gondolier and others were noteworthy. There were also a good number of Perpetual-flowering sorts.

Mr. Charles Blik, Hayes, Kent, had a pretty exhibit of very fine Carnations. They were set up with "grass" as an embellishment, and looked very prettily. Pater, Cyclops, San Remo, R. Morton, The Nizam, Salome, May Day and King George were all very fine.

A splendid table group of Carnations was set up by Mr. H. Burnett, Guernsey, representing Malmaison and Perpetual-flowering varieties. R. F. Felton, Mikado, Mrs. H. Burnett, Mrs. Tatton, Enchantress, Mandarin, Mrs. W. B. Clode, Duchess of Devonshire and Marmion were well shown.

Mr. C. Engelmann, Safron Walden, Essex, also staged Carnations splendidly in a table group. Handsome blooms in vases and stands in variety were shown in beautiful condition, and this grower well maintained his reputation. Elektra, May Day, Rex, Carola, Lady Northcliffe, White Star and Sunstar were all good.

A very fine exhibit of Carnations was shown by Mr. James Douglas, Edenside, Great Bookham, Surrey. The varieties shown were the hardy border kinds, and they were distinctly good. Mrs. Fenton, Greyhound, Mandalay, Miss Willmott, John Ridd, Mrs. R. Gordon, Lord Nelson, Mrs. Henwood and Mrs. Elliot Douglas were a few of the more lovely things sent by this well-known raiser and grower.

STOVE AND GREENHOUSE PLANTS.

From Mr. W. J. Godfrey, Exmouth, came a capital collection of well-grown show and fancy Pelargoniums, set up in attractive fashion. Lady Doreen Long, Bicton, Mrs. A. Wootten, Bystock H. S. Davy and King George V. were noteworthy. Sweet-scented Pelargoniums were also represented in a small group from the same firm.

British Ferns were represented in considerable variety by Messrs. H. B. May and Sons, Edmonton. These beautiful native Ferns were shown in the pink of condition, and could not have failed to please visitors. Of the better things, *Polystichum aculeatum gracillimum* Druryi (a lovely plant), *P. angulare divisilobum* capitatum, *Athyrium Filix-femina gemmatum* and *Scopolopodium vulgare crispum Robinsonii* were specially good sorts.

Ferns and Cacti made an interesting exhibit as shown by Mr. H. N. Ellison, 5 and 7, Bull Street, West Bromwich. This was a very representative group, and many species were in evidence. The plants were of much interest to the public.

Ivy-leaved Pelargonium Queen Mary was shown in a table group by Mr. H. Hensley, Crawley, Sussex. The plants were freely-flowered, and were also in good health.

A pretty group of *Araucaria exaltata gracilis* was set up by Messrs. Carter, Raynes Park, S.W. The plants were well grown, being feathered with foliage down to the rim of the pots.

Gloxinias and Streptocarpus were well shown by Messrs. John Peed and Sons, West Norwood, S.E. These plants had fallen with the staging in the early morning, and had come through the ordeal very well.

Cut Zonal Pelargoniums were exhibited by Mr. Vincent Slade, Taunton, Somerset. Large and handsome bunches of popular sorts were shown.

A group of miscellaneous flowering plants was staged by Messrs. J. Veitch and Sons, Limited, Chelsea, and although the plants had suffered by the fall of the staging in the morning, they looked very well. Malmaison Carnations, Begonia Lucerne, Achimene Rose Queen, Cannas, Streptocarpus, Calceolaria Burbiidgei and Solanum Wendlandii were a few of the better things in this exhibit.

Hardy Ferns were well shown by Mr. Amos Perry, Enfield. The plants were pleasingly disposed among boulders of rocks and were made to appear quite natural in their surroundings. Many fine specimens were in evidence, including *Polystichum angulare* Gow's Hybrid.



A GROUP OF ROSES SHOWN BY MESSRS. PAUL AND SON, CHESHUNT, HERTS, AT THE HOLLAND PARK SHOW.

of Smilax and Asparagus and columns of Sweet Pea blossoms, made a really grand effect. An immense array of vases, filled with high-quality flowers, made one of the best efforts of this great firm. The best kinds were Southcote Blue, Doris Usher, Helen Grosvenor, Mrs. A. Ireland, Sutton's Queen, Sutton's Mauve on Cream, Brilliant Scarlet, Sutton's Scarlet Crimson and Sutton's Rose Pink.

Quality and effect were represented in the marvellous display of high-class Sweet Peas by Messrs. Dobbie and Co., Edinburgh. This firm has achieved such distinction in the development of the Sweet Pea that we naturally look to them to do something more meritorious than other growers, and in this exhibit we were more than pleased. Pyramids, vases, &c., represented these flowers superbly, and each vase contained blooms of the very best. Special mention must be made of Mrs. Cuthbertson (clear rose pink standard, white wing flushed pale rose). Four or five blooms could be seen on each stem. Dobbie's Scarlet (scarlet, toned cerise), Brunette (rich, deep mahogany self), Lavender George Herbert (Dobbie's stock—plenty of fours, blush lavender) and Decorator (old rose and terracotta) were among many others that were superb.

Mr. J. D. Webster, Chichester, had a capital lot of Sweet Peas in charming variety. Juliet, Senator, Selected White Spencer, Mrs. C. W. Breadmore, Thomas Stevenson, Elsie Herbert, Helen Grosvenor, Masterpiece, Prince Olaf, Mrs. Heslington and Mrs. Charles Foster were a few of the better kinds in this good collection.

Mr. Charles W. Breadmore, Winchester, staged a magnificent group of Sweet Peas, exhibiting about one hundred and forty vases, including all the newest and best varieties in commerce. The flowers were set up most attractively, were well coloured and of good quality. Varieties deserving special mention were Aggie Elder (rosy cerise), Princess

Unwin were a few of the better things in this truly grand lot of flowers.

Mr. James Box, Lindfield, Sussex, had a grand mass of Sweet Peas, exhibiting the better and well-known sorts. We think this exhibit would have looked better had it been less crowded. Mrs. Gibbs Box, Money-maker, Arthur Unwin, Barbara, Countess Spencer, Audrey Crier and James Box were worthy of mention.

A large and comprehensive collection of Sweet Peas was shown by Messrs. John K. King and Sons, Coggeshall, Essex. All the good things were to be seen here, but the general effect was not so good as it might have been, owing to the crowded state of the vases. America Spencer, Doris Burt, Rainbow Spencer, Marie Corelli, Mrs. A. Ireland, Thomas Stevenson, Melba and Prince Edward of Wales were very charming.

A useful collection of Sweet Peas was put up by Mr. Marshall Y. Green, Eynsford, Kent. Novelty and well-known sorts of sterling merit were to be seen in excellent form and condition, high quality characterising all the flowers. Mrs. C. W. Breadmore, Orion, Edna Unwin, Barbara, Nellie Maslin and Marchioness of Tweeddale were exceptionally good.

Mr. Robert Sydenham, West Birmingham, put up an exhibit of an interesting character, staging handsome bunches of the more popular varieties. Lihan, Mrs. T. W. Warren, Orion, Maud Holmes, Lady Evelyn Eyre and Elsie Herbert were all good and well grown.

CARNATIONS.

A wonderfully fresh and bright exhibit of Carnations was staged by Mr. G. Lange, Hampton. Stately vases were artistically arranged with very clean and beautiful blossoms. The more noteworthy sorts were Rose Pink

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Sweet Peas in Dumfriesshire.—Among the considerable number of places in Dumfriesshire where Sweet Peas are cultivated in the most successful way is Castlemilk, Lockerbie, the garden of Sir R. W. Buchanan-Jardine, Bart., where his gardener, Mr. John Jeffrey, grows them well. Many of the stems this year have been 22 inches long with flowers in proportion. Senator Spencer, Clara Curtis, May Campbell, Mrs. C. W. Breadmore and many others have been exceptionally fine. Deep and thorough cultivation is practised at Castlemilk, and the reward is seen in the shape of magnificent flowers.

Roses and Sweet Peas at Purley.—One of the best local shows it has been our privilege to see was held by the Purley Rose and Horticultural Society on Saturday last in the grounds of Upper Woodcote, the residence of the president, Mr. William Webb. The Roses, notwithstanding the early season, were exceptionally good, and competition was very keen indeed. Sweet Peas, too, were also good, though in a few instances the effect of the hot weather was too apparent. Seeing that Purley boasts a road nearly a mile in length, bordered on each side with rambler and dwarf Roses, it is not surprising that these flowers are popular in the locality. Bordering another road near by is a beautiful herbaceous border, a feature that might well be adopted in many so-called garden suburbs.

Mulberry with Two Kinds of Flowers.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. Luxmoore of Eton wrote regarding a Mulberry in his garden which showed a tendency towards dioecism. The staminate flowers were all upon one part of the tree, with but few pistillate ones among them. The pistillate flowers were mostly upon the other branches, and the separation of the two forms of flower was almost complete upon the different parts of the tree. Mr. Wilks said that a tree in his garden always produced the two forms on separate branches, and the leaf colouring was quite distinct, and had been so for many years. Mr. Hales said the same was true of two trees in the Chelsea Physic Garden, and was constant. It would be of interest to see the behaviour of plants raised from cuttings from the distinct parts of the trees.

Flowers at the General Post Office.—It will be of interest to a great many of the general public to learn that among the employés at the General Post Office there are many enthusiastic amateur gardeners, and that at least two distinct horticultural societies exist there. One is the St. Martin's Horticultural Society, and the other the Central Telegraph Operators' Society. Both held their summer shows last week at the General Post Office, and it was interesting to see the perfection

to which flowers, fruits and vegetables had been brought by the men and women who deal with our telegrams and letters. Sweet Peas, Violas and Roses were perhaps the strongest features, though fruit was exceptionally good in the Telegraph Operators' show. At the St. Martin's Society's show we were particularly pleased with a basket of flowers shown by a lady member. This was composed of crimson Roses, blue Hydrangeas and Ferns, and was almost equal to anything of its kind we have ever seen at the "National" shows in London.

The Wild Thyme as a Rockwork Plant.—Although the varieties of our common wild Thyme (Thymus Serpyllum) cannot be assigned a place among the choicest of subjects for the rockwork, yet some of the forms are very beautiful when grown in this way. The rich-coloured kinds, such as coccineus and splendens, are the more striking, but the white variety albus possesses a quiet beauty of its own, and affords a direct contrast to those of richer hues. To the beginner in rockwork planting, especially such as aim at effect rather than the rarity of the specimens, these Thymes can be recommended, as, under anything like favourable conditions, they are, given a sunny spot, sure to do well. Few plants will stand drought better. Again, for the taste which now prevails of forming paved walks and planting subjects of humble stature between the interstices of the stones, few plants are more fitted than Thymus Serpyllum and its varieties, as they will put up with a reasonable amount of treading on, and, when slightly crushed, their pleasing perfume is most pronounced.

Good Examples of Summer Bedding.—The gardens at Hampton Court have long been celebrated for the excellence of their summer bedding, as well as for the pleasing and unorthodox combinations, that are always to be found there. With so many striking examples to select from, and the fact that very few persons see eye to eye in such matters, it is difficult to select the very best, but the following appealed strongly to us, both from the point of beauty and novelty: (1) A groundwork of the white-striped *Holcus mollis* variegata and dwarf *Nigella*, over this good-flowered examples of *Verbena* Miss Willmott, while standing above all the rest were the feathery plumes of the lilac pink coloured *Astilbe* Venus, the whole being edged with *Echeveria secunda* glauca. (2) A carpet of the dazzling white *Calocephalus* (Leucophyta) *Brownii*, dotted over with tall plants of the same, and of the white variegated *Phlox* Comtesse de Jarnac, the entire bed being sprinkled over with the pretty double pink *Begonia* Major Hope. (3) A close groundwork of the white *Koeniga maritima*, over this *Begonia* Major Hope, with a few erect 2-foot plants of *Calocephalus* *Brownii*.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose Pink Roamer.—We hear very little of the single wichuraiana Rose Pink Roamer nowadays, though it is more worth growing than some of the Roses of climbing habit which are being showered upon us. It has been in cultivation for a considerable number of years, and has proved a very satisfactory one for growing on pillars or walls, or up among the branches of trees. On a tall tree stump here it is very good this season, even finer than last year, and giving a great number of its deep pink, lighter-centred single flowers. Although single, these last considerably longer than might be expected, especially in a cool season. It is remarkably free in its growth, and soon makes long, pliant branches which lend themselves to any system of training required.—S. A. DUMFRIES.

The Day Lily.—This good, well-known plant, *Hemerocallis fulva*, is as yet unsurpassed in its own way, though we have had quite a number of newer *Hemerocallis* introduced since its time. Its tawny-coloured flowers look very handsome and showy, though not brilliant, when on a plant three feet or so across, and the constant succession of flowers makes it a most valuable border plant, though the individual blooms are somewhat short-lived, like those of the other species of *Hemerocallis*. In moderate soil it will attain a height of about four feet, and is then a striking ornament of the garden in late June or July. Some prefer the double flowers of the variety called *Kwanso*, and others, again, the form *variegata*, with variegated leaves; but I must confess to a distinct preference for *H. fulva* itself. It is sometimes called *H. disticha*, and appears to be a native of both Europe and Temperate Asia.—S. ARNOTT.

Lord Bacon and Gardens.—At the recent unveiling of the statue to this great philosopher, allusion was made to Gray's Inn Gardens, in which Bacon took much interest. The account-books of the Inn give items of expenditure and money laid out in 1598 for their arrangement. The gardens and walks remain about the same to-day, and Charles Lamb spoke of them as the "best gardens of any of the Inns of Court." Gardening art was beginning to assert itself, and geometrical designs were coming into fashion in the gardens at Nonsuch, Theobald's and Hampton Court. Bacon seemed to condemn this conventional arrangement and the making of "figures with divers coloured earths." Nonsuch was specially famed for its gardens and lawns. Broad terraced walks, long, varied banks and alleys of trellis-work diversified the prospect, and it is said Lord Bacon had this picture in view when he wrote his "Essays of Building and of Gardens." Little indeed remains of Nonsuch, once the fairy-like structure of Tudor days, wherein architectural art was employed in such a skilful manner that the palace became a byword for quaint and original beauty. Antiquarian interest has been lately revived in the excavations of the ground, which will possibly identify the site of some of the inner courts or the banquet-house. Wimbledon House (the home of the Cecils) was also famed for its gardens, and Henrietta Maria, Queen of Charles I., took great interest in the gardens. Trees from France were transported thither, and in later times John Evelyn, so great an authority on horticulture, was consulted as to the arrangement of the Wimbledon gardens. We still have evidence of the story of gardening from past days,

when the market-gardens of Bermondsey, Battersea and Fulham, places once associated with fruit and vegetable culture, were much used and frequented. It was a common thing in the early years of the nineteenth century for the gentry to drive out to Battersea Fields, where Melons, Mushrooms and Radishes could be bought, products for which the light soil and marshy land were favourable.—S. W. K.

The "Breaking" of English Iris.—I have for some years past been carefully growing on a very pretty mauve English Iris (*I. Xiphium*), which was an entire self without any suspicion of a splash of any darker shade. It appeared as a chance seedling, and I thought I had got hold of a prize. To my intense disgust, three out of my little stock of fifty have this year come "broken," as we say in Tulip lingo; that is to say, each of them is very much marked with pale rosy purple splashes, and the ground colour of the whole is of a decidedly darker shade. I have been in correspondence about it with my old friend, M. van Tubergen of Haarlem, and he tells me that "they all do it." This is news to me. I thought the peculiarity of breaking was confined to the Tulip. I have looked up *I. Xiphium* in Mr. W. R. Dykes' excellent little book on Irises in Present-Day Gardening, but he does not mention it. The dark garden forms which I happen to have do not seem to do it, nor yet the white *Mont Blanc*. Can anyone throw light upon this peculiarity?—J. J.

Showing Daffodils.—A word, please, Mr. Editor. I think your correspondents are a bit muddling things up. The late Lord Chamberlain once got up in the Commons and said, "I am not an agricultural labourer." I believe it tickled the House immensely. Now that is what a lot of show flowers say, and what a lot of garden flowers say. There are, of course, many mixomycetic ones (good hard word that, eh!) which are neither fish, flesh, fowl nor good red herring. They are lucky dogs, right either way. But a show flower is a show flower, and its first purpose in life is to be sent to shows; so with a garden flower, its prime object is to make an effect in the garden. They are two distinct things, and must be treated differently and thought of differently. This must happen directly a plant comes into the select circle of "florist flowers." It cannot be helped, although I know it is distressing to our-like-them-as-they-grow-naturally friends. All I am prepared to say now is that I do not think anything should be added to or attached to a flower when it is exposed on a show-board. The *débutante* does not go to Court with her curling-pins in her hair. When the National Daffodil Society comes into being, these things will be all straightened out, but not till then. At present Daffodilism is a community with no organisation and no leader.—J. JACOB.

— I should like to correct what is evidently a slip of the pen or a printer's error in "J. E. D.'s" letter on page 350. He says I admitted that I was "almost converted" to the little discs; I have done nothing of the sort. In the case I referred to on page 315 the disc was so cleverly placed that I was "almost deceived"; but converted, no, certainly not. "J. E. D." sounds the right note when he says that if we allow faking we encourage the wrong sort of flower and knowingly mislead (I would say "deceive") the public; and "A Gardener," I think, hits the right nail on the head when he suggests the reason for so few writing against faking is because there are too many exhibitors who have fallen to the temptation of just pressing out an *Engleheartii* cup that was not

quite flat enough, or coaxing a refractory petal into temporary flatness with a paper disc; and because I have few supporters among the exhibitors is the strongest of reasons why someone should voice the opinion of those who are not exhibitors. The public, once bit, will certainly be twice shy, and I trust that by thoroughly ventilating the subject in good time we may be able to prevail upon the various Daffodil societies to do all they can to encourage the honest flowers.—W. A. WATTS.

— Both Mr. Watts, page 338, and "J. E. D.," page 350, have assumed that my remarks had reference to "bad" and "feeble" flowers, though I never used those terms. I had in my mind what are normally good show varieties only. I used the term "artistic" faking with intention, for I do not consider it is "artistic" to leave a paper collar or support on the bloom once it is set up on the show-bench. It is not that it is "dishonest" (in spite of Mr. Watts), but merely inartistic; and, as far as my experience goes, the practice is safe to be penalised by the judges when used in competitive exhibiting. I cannot help thinking it is regrettable that Mr. Watts should use the term "dishonest" so freely in commenting on the practice of those who do not happen to agree with his own particular methods!—A SMALL EXHIBITOR.

The Double Standard in the Sweet Pea.—It would be interesting to learn from what point of view the National Sweet Pea Society regards the presence of the twin or duplicated upper petal to which the phrase "double standard" has been given. Judged by the numerous, almost sensational, disqualifications at the recent show from this cause alone, it would appear that it were regarded as a defect, something to be discouraged, were it not for the fact that in at least three classes such flowers were admissible—were, indeed, asked for by the society. Hence the point of view is not a little obscure. If, as some appear to imagine, this duplication of petals is wholly the outcome of excessive feeding, a stepping-stone to grossness and the spoliation—partial or otherwise—of a graceful and beautiful flower, then I think the majority of Sweet Pea lovers would back the society up in a rigid adherence to a condition—however sweeping and drastic that condition might be—in any endeavour to stem the tide of any such catastrophe. But the fact that this same duplication of upper petals is more or less prevalent in flowers grown in the poorest of soils, and is seen in sprays with not more than two flowers thereon, would appear to suggest that it is but a stage, a phase, in the evolution of a flower which has hitherto displayed a tendency to variability in its floral parts. Already the waved flower has become quite a craze, and has done not a little probably to create that greater popularity which the flower now enjoys. The coming of the duplicated standard may be but a move to more complete doubling of all the parts of the flower, and, if so, who can gauge the end? What saddened one most of all at the recent show was to see the finely-grown, well-displayed groups disqualified one by one, though it was some satisfaction at least to know that big men and little men—top-sawyers and pitmen—all suffered alike.—E. H. JENKINS. [We think the position of the National Sweet Pea Society over this matter is perfectly clear. The committee recognised that the double standard had come to stay, and provided three classes for it, but rigidly, and we think rightly, excluded it from the other classes. Whatever the merits or otherwise of the double standard may be, the judges were bound, on the terms of the schedule, to disqualify the exhibits they did —E.N.]

Rose Lady Gay for Towns.—I enclose herewith a photograph of the climbing Rose Lady Gay. It is grown on a wire arch, which it completely covers. I estimate that at the time of writing it is bearing about five hundred trusses of bloom, the rich cherry pink of which is relieved by the beautiful glossy foliage. The successful growth so near London should encourage the suburban amateur who desires such a form of garden decoration. — F. W. MILTON. [Unfortunately, the photograph was not suitable for reproduction.—Ed.]

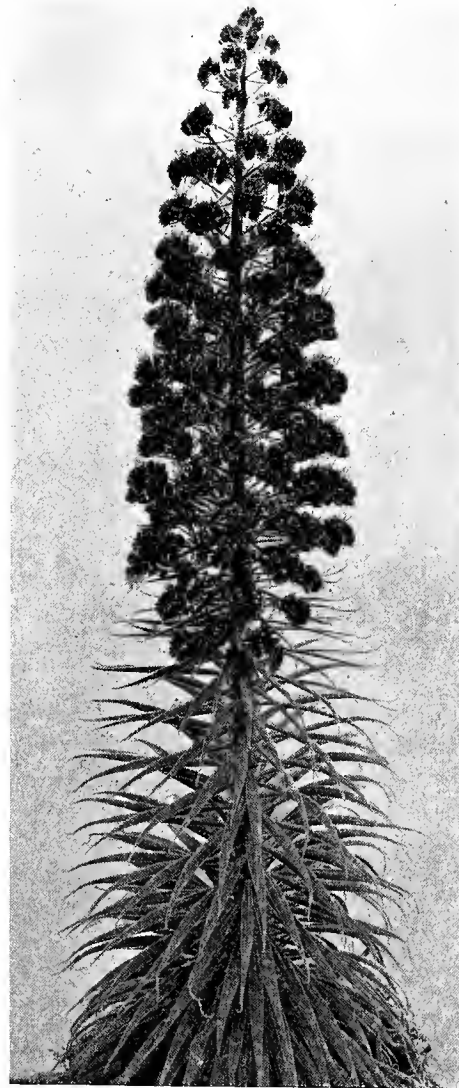
An Interesting Shrub (*Philesia buxifolia*).—This exquisite little shrub is frequently the despair of would-be cultivators without a cool house in which to grow it; but there are some who can, and do, succeed with it under other conditions. It is a success with some growers in the warmer parts of England and Ireland; but there are some who are equally successful with it in several parts of Scotland, always, however, with some precautions against severe weather. The writer knows of several Scottish gardens in which it is well grown with the protection of a hand-light, the top of the latter being taken off during most of the summer, but replaced for winter, with a little tilting in mild times. The best plant I have seen is in the garden of Mr. James Davidson, Summerville, Dumfries, where it fills the whole of a hand-light of medium size—about two feet square. It has been in the same place for several years and flowers with great freedom, giving an abundance of charming red *Lapageria*-like flowers, which look so well among the deep green leaves. At Summerville it is cultivated in a shady position, and in peat, loam and sand.—S. ARNOTT.

Echium Wildpretii.—I am sending a photograph of this handsome and striking-looking plant. It is a biennial and, like several other species of the same genus, a native of the Canary Islands, being originally raised from seed sent by Mr. Wildpret, Curator of the Botanic Gardens, Orotava, Teneriffe. Owing to the difficulty sometimes experienced in its cultivation, the following cultural notes may be of value: The seed is best sown during the months of July or August; it soon germinates. When large enough, the young seedlings should be pricked singly into 2½-inch pots. When the roots show through the compost they should be repotted into 3-inch or 4½-inch pots, according to the size of the plants, and they should pass the winter in pots of this size. At this stage they give little trouble if placed in a position well up to the glass, in a light pit, or on a greenhouse shelf. During winter they should be kept fairly dry at the root. On the turn of the year, if well rooted, they should be repotted into 6-inch or 7-inch pots, using a compost of good medium loam, with the addition of some leaf-soil, and plenty of coarse sand or old mortar rubble to keep the whole open. At this stage trouble generally starts, for, unless great care is exercised, each successive potting results in the loss of a few plants. They may be flowered in 6-inch pots; but if large specimens are required, they must be potted on into 8-inch pots. This should be done in time to get them well established before winter, as that is the most critical stage in their cultivation. At this stage they are striking objects, the plant consisting of a huge rosette of beautiful silvery grey leaves. During the second winter they require great attention to manage them successfully. As before, they should have a light, dry position, and no more water applied at the roots than is necessary to keep them from shrivelling. Early in the New

Year the stems begin to elongate, until, if everything has gone all right, they may attain a height of 2½ feet to 4 feet, nearly half the length being composed of the flower-spike. When in flower, which is usually about the beginning of May, they are very handsome with their great spires of beautiful rosy red flowers. In spite of its beauty it is not likely to become a popular garden plant, except by the few who love to cultivate choice and difficult subjects.—J. C.

FORTHCOMING EVENTS.

July 23.—National Carnation and Picotee Show at Vincent Square. Brighton and Sussex Horticultural Show (two days).



A STATELY BUGLOSS (*ECHIAM WILDPRETHI*).

July 24.—Leamington Flower Show (two days) Normanby Flower Show (two days). Bishop's Waltham Flower Show. Royal Botanic Society's Meeting. Hayward's Heath Flower Show. Lyndhurst Flower Show. Feltham Flower Show.

July 25.—St. Ives (Hunts) Flower Show. Ramsgate Flower Show. Killarney Sweet Pea Show.

July 26.—Huddersfield Horticultural Show (two days). Cheadle Flower Show (two days).

July 27.—Fife and Kiross Flower Show.

THE GREENHOUSE.

EAST LOTHIAN STOCKS.

HOW TO GROW PLANTS IN POTS.

THESE are few plants that are quickly raised from seeds more satisfactory in every way than East Lothian Stocks grown in pots for the embellishment of the conservatory in springtime.

Owners of comparatively cool conservatories or greenhouses cannot do better than raise a few seedlings for the purpose named. Four fine distinct colours may be obtained, and plants in 7-inch pots measuring nearly eighteen inches in diameter can be grown without difficulty. The fragrance is delightful, and the flowers last for a considerable time in a fresh condition. A fair percentage of double flowers may be had, but the single blossoms are equally fragrant and attractive. For grouping with other kinds of plants the singles are the most effective. They are generally the strongest plants, in the seedling stage especially, the doubles being dwarfer and of a more compact habit, and do not look as robust.

Sowing the Seeds.—Some cultivators sow the seeds in large pots, and do not transplant the resultant seedlings at all. This method I do not favour. I prefer to sow the seeds in a deep pan filled with nice loamy soil late in June or during July. The latter date is best for the South and the former date for the Northern Counties. The seedlings must be grown under quite cool conditions. Transplant them singly in 3-inch pots when they possess three or four rough leaves; use the soil in a medium state of moisture, and press it down a little with the fingers. Add a small quantity of old mortar rubble to the compost. The early transplanting will induce the formation of many fibrous roots, which is a great advantage. Do not allow the plants to become pot-bound, but re-pot them the moment a fair number of roots can be seen around the outside part of the ball of soil. At each repotting use the compost in a rougher state, and also make it firmer. Some plants will branch out naturally; others will require the main stem stopped. Keep the plants in a cool, airy frame until January, then transfer them to the greenhouse, and here again admit air to them freely on fine days. Feed the plants with plenty of diluted liquid manure directly the flower-spikes show.

AVON.

CALCEOLARIA BUTTERCUP.

THIS is a charming and graceful subject for the conservatory and cool greenhouse, attaining a height of 1½ feet to 2 feet. It is derived from the intercrossing of *C. Clibranii* and *C. Golden Glory*, and was raised by Messrs. Veitch of Chelsea at their Langley nursery. As would be expected from such parents, the flowers are yellow, and from a batch of seedlings a variety of shades are obtained, some are beautifully spotted, especially on the under sides. It quickly attains flowering size, lasts in bloom for a long period, and makes a splendid decorative plant. Seeds should be now sown in well-drained pans, and placed where the sun cannot reach them, when germination will soon begin. As the seedlings become large enough to handle, each may be given a separate receptacle, and should be potted on as required till they reach the flowering size, viz., pots 7 inches in diameter. A suitable rooting medium consists of fibrous loam three parts, and well-decayed leaf-mould one part. Grow on in cold frames, keep a sharp look-out for green fly,



POTENTILLA ALBA, A FREE-FLOWERING PLANT FOR THE ROCK GARDEN.

and never allow them to suffer from drought, when a healthy batch of plants rather out of the common run will be the result. S.

THE ROCK AND WATER GARDEN.

POTENTILLA ALBA.

IN the large Cinquefoil family there are many beautiful plants suitable either for the herbaceous border, like *P. argrophylla* and its numerous forms, or for the rock garden. For the latter purpose there are several choice dwarf-growing species that are very useful and ornamental. Among the latter may be included *P. alba*, which is here illustrated growing on a ledge and flowering freely during the month of April. Its home is in the Alps and Pyrenees, and it is a very attractive plant, with silvery leaves having a silky down on the lower sides. Very dwarf and not too rampant, the white, Strawberry-like flowers each about an inch in diameter, with a dark orange ring at the base of the petals, are freely produced. Somewhat resembling the above is the Pyrenean *P. alchemilloides*, with narrower leaflets, also covered with silky hairs on the under side of the leaf. It grows slightly taller and has rather smaller flowers, but produced in greater profusion. Among the yellow-flowered kinds, one of the freest is *P. nevadensis*, which barely reaches a height of 2 inches or 3 inches. It is a very compact-growing plant, with small, hairy leaves if planted in poor, sandy soil; but if put in richer ground it readily responds, and the flowering branches elongate to a greater extent. As a plant for growing in pans it is very useful for the alpine-house, producing plenty of flowers over a long period. Another pretty little plant is the European *P. aurea*; but the Himalayan form, *P. aurea* variety *ambigua*, has much larger, clear

yellow flowers on a dense carpet of foliage. All the foregoing are among the easiest of plants to grow, succeeding well in any sunny, well-drained position or on a rocky ledge. They all produce seed, by means of which they can be increased, as well as by division. Besides the plants mentioned there are numerous others, like *P. nitida*, which come into flower rather later.

LITHOSPERMUM PROSTRATUM CÆRULEUM.

ONE of the most popular inhabitants of the rock garden, *L. prostratum*, is a general favourite with all. Forming a spreading carpet of intermingled twiggy branches, clothed with evergreen foliage, it is a valuable plant for either the border or the rock garden. Planted on a rocky ledge, the shoots may be allowed to fall down the sunny face of the rock, thus forming a curtain of dark green, studded in spring with beautiful rich gentian blue flowers. For wall gardening it is an ideal plant, soon forming large hanging tufts of great beauty. As a pot plant it is charming, doing well in pans, and helps

to furnish the alpine-house, making quite an attractive feature. It is not particular as to soil, although it enjoys a good depth of light, rich loamy soil with plenty of humus in it. Although it is said not to like lime in any form, I have seen a large plant quite happy for many years in a bank mainly composed of limestone and mortar rubbish. *L. prostratum*, however, dislikes transplanting when of any size, and takes a long time to recover, so that it is always best to start with young plants and await their development. The plant illustrated, *L. prostratum cæruleum*, has flowers of a lovely pale blue colour, and is also well known under the name of Heavenly Blue. It is a charming companion for the type where both can be grown; but in some gardens the dark blue succeeds best where the light one fails, while in other gardens, again, the reverse is the case. Both may be propagated by means of cuttings in summer, selecting the short young growths with a heel and putting them in sandy loam in a close frame. W. I.

TREES AND SHRUBS.

THREE BEAUTIFUL SHRUBS.

A Useful Mock Orange.—In early summer we are accustomed to seeing many of the Mock Oranges in flower, lading our shrubberies with their wealth of flower and perfume. *Philadelphus grandiflorus floribundus* is a variety which for freedom of flowering and size of flower would be difficult to excel. It forms a symmetrical bush, throwing up straight, strong growths, from which next year's flowers will be issued, and perhaps their vigour will be more clearly understood when I state that many of the leaves, which are cordate in shape, are over seven inches long by 5 inches in width, necessitating the shortening back of the more vigorous ones to expose more clearly the sprays of blossom so freely produced. These measure from 8 inches to 12 inches long, and average as many blossoms, produced in pairs, each flower being opposite the other. The blossoms are pure white, slightly cup-shaped, single in form, with a bunch of golden anthers in the centre, and measure over two inches in diameter. The flowers are slightly scented, quite sufficiently so to make them agreeable.



A BLUE-FLOWERED ROCK PLANT, LITHOSPERMUM PROSTRATUM CÆRULEUM.

Escallonia langleyensis.—What a delightful shrub this is at the present season, whether seen as a bush specimen in the shrubberies or loosely trained to a wall or balustrade, where the countless flowers are portrayed to the fullest and best advantage. Though not large, the individual blooms are, nevertheless, remarkably showy, being of a rich shade of red, which contrasts with the shining foliage. Apart from its special characteristic, it makes one of our handsomest evergreens at other seasons of the year, and is quite hardy. It deserves planting freely. It is the result of a cross between *Escallonia macrantha*, a species with evergreen foliage and crimson-coloured flowers, and *E. philippiana*, a deciduous species with white flowers, and also wonderfully free and showy, though the flowers are not nearly so large as those of the hybrid.

Helianthemum formosum.—The mere mention of the name *Helianthemum* or their ally *Cistus* is sufficient proof of the beauty of the plant, and a collection of these forms one of the most interesting features in the hardy flower garden. That some are none too hardy I am well aware; still, they are readily increased by cuttings, and a few may always be held in reserve. The one above is now making a brilliant display and is flowering profusely, both planted among the stones beside the garden path, and in the fore part of the shrubberies, the numerous yellow flowers with the dark, almost pure black, blotch at the base of each petal rendering it most attractive. When planting any of the numerous varieties, a sunny, open site should always be chosen, which, with an open, porous soil, will suit their requirements to a nicety. E. BECKETT.

ROSE GARDEN.

NEW ROSES AT THE "NATIONAL" SHOW.

As usual, great interest was centred in the tent set apart for new seedling Roses at the National Show held last week, and it must be admitted that some very beautiful novelties were staged. Messrs. Cocker and Sons of Aberdeen unanimously obtained a gold medal for

Mrs. Andrew Carnegie, a most superb bloom, which some of the judges felt deserved a special award, apart from the blue ribbon of the Rose world. It is a seedling from Frau Karl Druschki, crossed with the old Rose *Niphotos*, and never at its best have I seen *Niphotos* with larger petals. The colour is the palest lemon white imaginable and the formation of the greatest beauty, with a fine globular centre and huge outer petals. Another gold medal was awarded to

Old Gold, a wonderfully coloured flower of the form of Mrs. Alfred Tate, but with the intense colouring of the *Eschscholtzia*, with more scarlet orange even than that. This lovely Rose was raised

by Messrs. S. McGredy and Son, Newtownards. When this variety and *Mme. E. Herriot* are on the market, our gardens will receive two lovely gems from a colour point of view.

No fewer than nine silver-gilt medals were awarded, one each to the following varieties:

Mrs. C. Reed, shown by Messrs. Lowe and Shawyer. It is a flower of the style of *Clara Watson*, but evidently of stouter build, and with a lemon-like shading.

Queen Mary is a really lovely and quite unique colour. If one can recall the old *Rose Luciole* it may best describe it to say it has many of the charms of that variety, but the buttercup yellow shading gives it a most wonderful hue, and I should not be surprised to find it in the front rank of decorative Roses. This fine variety was from Messrs. A. Dickson and Sons, Newtownards.

Mrs. C. D. Hunting, from Messrs. Hugh Dickson, Belfast, is a fine Rose. Perhaps to say it comes between *Arthur R. Goodwin* and *Mme. Ravary* would well describe it. Its petals are very firm, and it promises to be a good bloom to stand wet.

William Cooper, also from Messrs. Hugh Dickson, is a fine flower, but rather lacking in colour. Perhaps it is nearest to *Marquise Litta*, but with an orange hue.

Mrs. R. D. McClure, also from Messrs. Hugh Dickson, is a very pleasing shade of pink, like a salmon *Lady Ashtown*, and it looks as though it would hold up its head better.

Lady Mary Ward, from Messrs. McGredy and Son, is a real gem, of the type of *Duchess of Wellington*, but with a deeper orange tint.

Mrs. Fred Vanderbilt, also from the same raisers, is another fine bit of colour, reminding one of *Sunrise*, but in form more like *Countess of Gosford*.

A silver medal was awarded to **Moonlight**, one of the perpetual-flowering *moschata* Roses, which its raiser, the Rev. J. Pemberton, is giving us. They will be very beautiful garden varieties. It is like a pale *Trier*. Another one from the same raiser, named *Dinah*, is a pretty pink variety, and this gained a card of commendation. A similar award was given to *Coronation*, a very fine Hybrid Perpetual Rose, of superb form, and of a soft satin pink shade—this was from Messrs. Hugh Dickson; also to *Mrs. E. Alford*, which some thought deserved a higher honour. It is a fine big flower, in the way of *Mme. Abel Chatenay*, but larger. This was shown by Messrs. Lowe and Shawyer.



ROSE MRS. ANDREW CARNEGIE, AWARDED A GOLD MEDAL AT THE NATIONAL ROSE SOCIETY'S SHOW.

ROSES AS FREE BUSHES.

THE average reader of THE GARDEN cannot be aware that many of our best Roses may be grown as big bushes, or we should more frequently find them in gardens. Take, for instance, *Hugh Dickson*. How often do we find this grand Rose growing in a bed with such as *Caroline Testout* and *Mrs. John Laing*, totally usurping all the space by its long, straggling branches: but given a small bed to itself and its growths left long at pruning-time, we should have an abundance of its glorious crimson blooms to adorn our gardens. The same may be said of *Gustave Regis*. During a recent visit to Downside, Leatherhead, I saw a fine bed of this good Rose growing as big bushes nearly four feet high, and each bush a mass of bloom. *W. A. Richardson* is another Rose that may be so grown; and, indeed, many of the climbing *Teas* and *Noisettes* are a great success cultivated as free bushes. I have *Bouquet d'Or*, *Reine Marie Henriette*, *Zepherin Drouhin*, *Avoca*, *Sarah Bernhardt* and others growing as bushes some three feet to five feet high, and bushy as well, and they are a great success. *Lina Schmidt-Michel* is a beauty for this purpose; its huge semi-double flowers of *Mme. Abel Chatenay* colouring

Sunburst was not shown as large as it will come outdoors. The writer has had it of large size and superb form upon outdoor plants, and if it could have been put up in that form it would have gained a gold medal. It is a Rose that everyone must possess, and is one of the most lasting flowers I know of. I am certain it will prove to be one of *M. Pernet-Ducher's* best, and that is saying a good deal.

Mrs. Edith Part, from Messrs. McGredy and Son, is another remarkable colour, something of the tint of a highly-coloured *Beauté Inconstante* blended with *Lady Pirrie*. The colourings of the new Roses are so marvellous that it is only by comparing them in this way that one can describe them. The bloom is a nice solid flower, quite waxy in appearance.

are a joy to behold. I like to see some of these free-growing Roses in the centre of beds of bushes of the same colour, and I think it will soon be the recognised thing to plant the climbing sports of various Roses among the bush plants of the same variety; for instance, Climbing Lady Ashtown among bushes of the same, and also Climbing Liberty and Climbing Richmond. As a support three stout canes in the form of a tripod would be suitable, and one could plant three plants to each tripod. This arrangement would be a change from the use of standards as dot plants among bushes.

SPORTS OF ROSE KILLARNEY.

THIS good old Rose is behaving in a remarkable manner, for it is throwing off quite a number of

enlighten us as to its parentage, this might help us to solve the mystery. Anyway, the two recent sports should be obtained as soon as possible, because I should say they are going to be very useful. P.

ROSES AT KEW.

A FEW weeks ago we published an illustrated article on the Rose Dell at Kew, calling attention to the Ayrshire, multiflora and other Roses, many of which are now passing over. In this beautiful dell Roses are allowed to ramble almost at will over rustic logs and poles, and, needless to add, they flower in wild profusion. Helene, Tausendschön and Jersey Beauty have been wonderfully free-flowering this year. While the beauty of the Rose Dell has more or less departed for this season,

producing a quantity of exquisite flowers, while Lady Ashtown, Joseph Lowe and Mildred Grant are worthy of special mention as bedding varieties. A large bed of Clio is now a perfect mass of bluish pink flowers. With this variety, as with Frau Karl Druschki, which is also very fine, the long branches have been pegged down, and the side shoots from these maintain a quantity of bloom over a long period.

The pergola at Kew, of which we give an illustration, is aglow with colour, as it has been for some weeks past. Hiawatha and Lady Gay are remarkably good, and the trusses of bloom now hang down from the iron chains of the pergola in great profusion. Near to the Iris garden may be seen arches of Dorothy Perkins and its white variety, the two together making a most charming picture.

American Pillar and Dorothy Perkins are now at their best over the archways leading from the pergola to the herbaceous garden.

It would not be fitting to bring these notes to a conclusion without reference to the very effective display that has been created by planting rambling Roses near the water-side in the front of the Palm House. The varieties Dorothy Perkins and Lady Gay, now smothered with bloom, are drooping over the masonry, and the glory of the flowers is reflected in the placid water beneath.



A BED OF ROSE LA TOSCA AT KEW.

sports. Last year our American friends obtained a more double form, which they called the Double Pink Killarney. Now, the latest are a dark pink Killarney and a double white Killarney. Both of these are finding much favour on the other side of the Atlantic, one grower alone planting out under glass no fewer than 10,000 of each. The double white Killarney will, I think, interest us more over here, for it will be invaluable in a show-box with its exquisite form to add to its beauty.

It seems to one beyond question that the growing of Roses in huge quantities under artificial conditions tends to the sportiveness of a Rose. A case in point was the old variety Catherine Mernet, which has given The Bride, Bridesmaid and Muriel Grahame.

Would the propagating from cuttings have anything to do with creating these sports, or is it the artificial heat? Or is it explainable on Mendelian lines? In any case, it seems strange that several sports should follow in quick succession from Killarney, for the original variety has been in commerce now some fourteen years, and yet it is only lately it has taken to this sportiveness. If Messrs. A. Dickson and Sons would

there are numerous beds of standard and bush Roses, notably in the formal beds surrounding the Palm House, now to be seen in the height of perfection. That grand Rose Caroline Testout, which still retains its proud position as the best Rose for a town garden, is perhaps the best of all Roses at Kew at the present time. Grown in large beds, both as bush and standard, it is now rendering a really good account of its flowering propensities. La Tosca, a charming variety, is flowering in great profusion, as may be seen from the illustration on this page, and in a bed immediately opposite, the Lyon Rose is bearing a profusion of blooms; these, however, are a shade disappointing in tone of colour. There is also a good bed of the Lyon Rose in standard form, and another of Florence Pemberton, each with a carpet of Mignonette, which unquestionably enhances the beauty of the standard Roses. Grace Darling is not quite up to its usual good form, and La France, for some unknown reason, has apparently fallen into obscurity. Mme. Ravary, although not so prolific as some, is, nevertheless, very attractive on account of the beauty of its individual blooms. A bed of shapely bushes of Duchess of Wellington is now

if one like the bloom I have been obtained occasionally. It is semi-climbing in growth, which, perhaps, is another bad feature; but if planted out and the growths left long when pruning, it affords a glorious bit of colour, far surpassing Roses of the Maharajah type, and as a standard it is superb. I had not observed its fragrance before, but it is not unlike that of ripe Raspberries. P.

THE FRUIT GARDEN.

SOME GOOD STRAWBERRIES.

THE coloured cover of this issue represents some comparatively new and good varieties of Strawberries, and as the time for planting is now at hand, we commend these to the notice of our readers. The one at the top of the cover is Laxton's Cropper, a variety that was introduced by the firm whose name it bears in 1907. It is a midseason variety, the fruits being large and of excellent quality. They are also firm, and consequently travel well. On the left-hand side we have another fine Strawberry, named The Bedford. This, too, is a midseason variety, and was raised by crossing Dr.

Hogg and Sir Charles Napier, both good Strawberries. The Bedford possesses the fine flavour of Dr. Hogg and the good colour of Sir Charles Napier. It is a very robust-growing sort and a heavy cropper, and, as will be seen by the illustration, produces large and handsome fruits. The variety on the right is Laxton's Epicure, one of the best flavoured Strawberries ever raised. This is not to be wondered at when we know that British Queen and Fillbasket were its parents. Indeed, in flavour it is almost identical with British Queen, and its habit and cropping qualities similar to those of Fillbasket. Strawberries planted between now and the end of August will give good crops of fruit next year, provided the soil is well dug and manured, but the earlier they are got in the better.

THE FLOWER GARDEN.

THE SCOTCH ROCKET.

(HESPERIS MATRONALIS FLORE PLENO.)

THIS, one of our very choicest hardy plants, is in danger of dying out, as so few growers seem to know anything regarding its wants. To entirely lose this fine plant would be a calamity indeed, and every effort should be made

to increase the stock all over the country. I have known and cultivated these Rockets for many years, and find very little difficulty in keeping up a good stock. At the same time, disaster may overtake anyone if they neglect the plants for even one season. I have experimented for years with this plant, and while several plans are fairly satisfactory, I have proved over and over again that propagation by cuttings is by far the best method of raising a healthy stock.

How to Proceed.—As soon as the flowers fade, or earlier if they are wanted for room decoration, cut down the stalks to 3 inches or 4 inches from the ground. Loosen the soil all round the plants with a Dutch hoe, and if the weather is dry give an occasional soaking of water. Encourage fresh, sturdy growths by these and other means that may occur to the cultivator, for it is important to secure growths of fair size by the beginning of September. Of course, after one has obtained a fair stock, the best method for securing cuttings is to plant out a few of the strongest young plants in the reserve garden in spring, and as soon as the flower-stems rise cut them close back, and thus ensure plenty of early cuttings. As soon as the growths are large enough to make into cuttings, take them off with a knife, securing, if possible, a heel to each. Trim slightly in the usual way, and then insert in pots or boxes of light, sandy soil, taking care to keep the centres of the cuttings free of soil. Even the best of cuttings are usually rather short, so a good deal of care is necessary to secure them properly in the soil. I have heard of enthusiasts who tied each cutting to a small stake before inserting, as by this means the cuttings were kept steady until roots were formed. Personally, I have never tried this, but with very short cuttings I can appreciate the advantage of the method.

Treatment of Planted Cuttings.—Having inserted all the available cuttings, give a gentle watering and set in a cold frame. Keep close and shaded for ten days or so, and then gradually admit a little air, as the Rocket detests being coddled, and the leaves will most likely damp off if kept unduly close. The giving of abundance of air on every suitable occasion during late autumn, winter and spring, and a frequent removal of all dead foliage, are all that is necessary during that time. The removal of the dead leaves requires considerable care, as these do not readily leave the little plants, and if roughly handled the cuttings will be loosened, or even the tender roots destroyed at a later period. By the beginning of March the plants should be ready to be hardened off, and should then be planted out in fairly rich and well-tilled soil in a sunny situation. Soil of medium to heavy texture best suits this plant. I should perhaps have said that while boxes are suitable for the cuttings, I have always had the greatest success by using pots. A really good, strong cutting may be given a 3-inch pot, and smaller ones may be inserted round the edges of 4-inch or 5-inch pots, three to five in each. In February pot off singly those raised in boxes into 3-inch pots or round the edges of larger ones.

Other Methods.—In late seasons, or in extra dry summers, the growths made are frequently

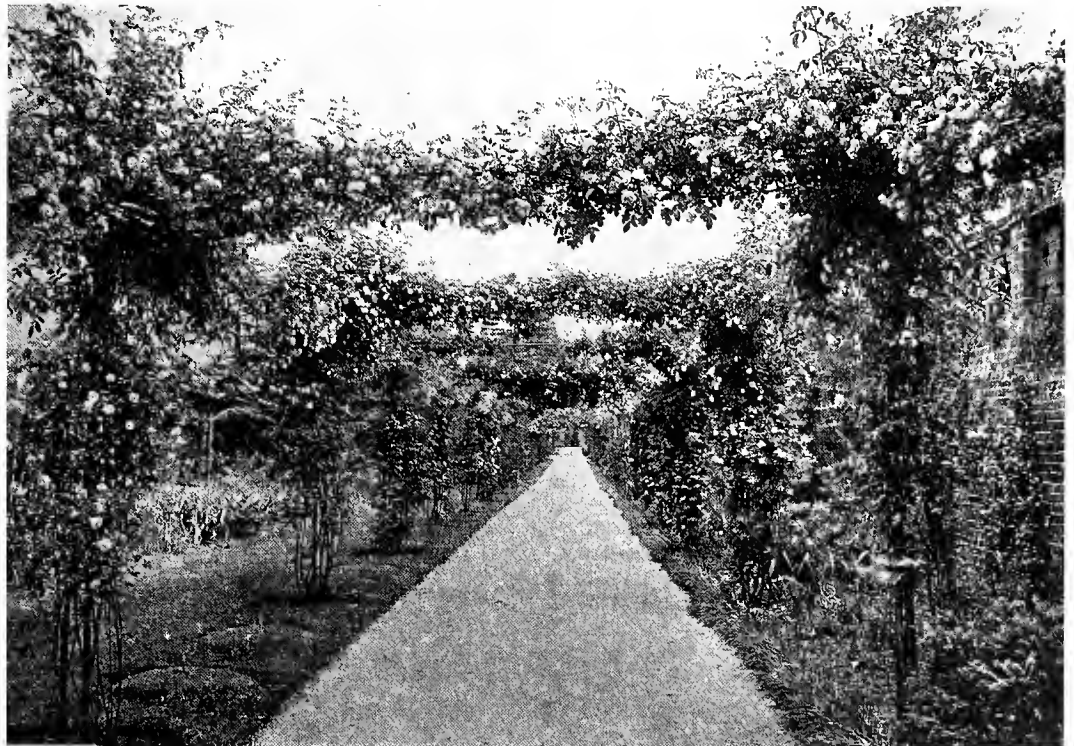
the plants in autumn or spring, planting directly where they are to bloom, but this is by no means a safe plan. If the first two methods I have explained are carried out each season, one may always rely on having abundance of this fine plant to bloom during May and June. The true Scotch Rocket grows from 18 inches to 24 inches high, and must not be confounded with the tall French variety, although this also is quite worthy of a place in a large herbaceous border. It is by no means so difficult to manage, and may be broken up and replanted like the majority of hardy plants. The Scotch Rockets are nearly pure white, and have beautiful Stock-like, fragrant spikes of flower. There is also a fine lilac pink sort, almost as desirable as the white. The latter is slightly taller, but blooms at the same time.

Preston House, Linlithgow.

C. BLAIR.

SWEET PEA NOTES.

The Great Show.—Although these notes will not appear in THE GARDEN for several days after the National Society has held its great annual exhibition, I am forced to write them many days in advance of the date. During the past few weeks I have had the pleasure of seeing a few thousands of plants in different places, and I have no hesitation in concluding that the present show will be



THE ROSE PERGOLA AT KEW, LOOKING FROM THE SOUTH END.

much too short for cuttings, so the plants should be carefully dug up early in September and divided with a sharp knife. Each crown with a few roots attached will make a plant if placed in a 3-inch pot; but if two or three crowns can be retained on each piece and given a 4-inch or 5-inch pot, far finer plants will be secured for next season's blooming. After potting place in a cold frame, and keep close and shaded for a few days. Subsequent treatment is identical with that already advised for cuttings. Still another way is to lift and divide

as good as any of its predecessors, and better than some of them. The flowers are of excellent size, substance and colour, and, artistically staged, will create a magnificent display, or they will do so unless hideous boards are down the middle of each stage, as I am led to believe was decided at a recent committee meeting. Our show has been the most beautiful of all, but such an addition will, I fear, completely spoil it.

Double Standards.—There is one thing that worries me considerably in regard to the show, and

that is the remarkable number of flowers which are throwing double standards. In the schedule for this year there is a rule under which double standards will disqualify any exhibit other than in three classes which are specified. This will involve the judges in the task of closely examining every bloom throughout each stand. This is by no means a light task, and there are some judges who will positively refuse to do it. And small blame to them. Disqualification must be done at times, as all experienced adjudicators know, but it is not a pleasant thing, and to inscribe the dread word on an exhibitor's card because he has one flower out of 300, or even more, in a stand is too terrible to contemplate. Personally, I am opposed to double standards, but that does not alter the fact that several hundreds of people appreciate them; neither does it the second fact, that a few blooms with double standards in a bunch make it conspicuously handsome. The trouble lies in that the double standard may not show itself, even to the most critical eye, until the exhibit is staged and the hall is cleared for the judges. Must the exhibitor be penalised for an error which he could not possibly prevent? Were he to put half the stems up with double standard flowers, the case would be altered, but the odd one is a dangerous thing, and will almost assuredly appear. I can remember the day when every exhibitor was disqualified in one of the most important classes at the "National" because two or three fiery individuals yearned to slaughter me. One of the disappointed ones had one spike too many in about two hundred and fifty. Would anyone suggest that that solitary spike was added to improve the group? Not a bit of it; but the rule said twenty, and no earthly body could make that either nineteen or twenty-one. Let us hope that there will be no such catastrophe with double standards. If there is, the society will require a new secretary, for Mr. Curtis will certainly be assassinated. The temper of the exhibitors at the "National" shows is not as sweet as it was in my day!

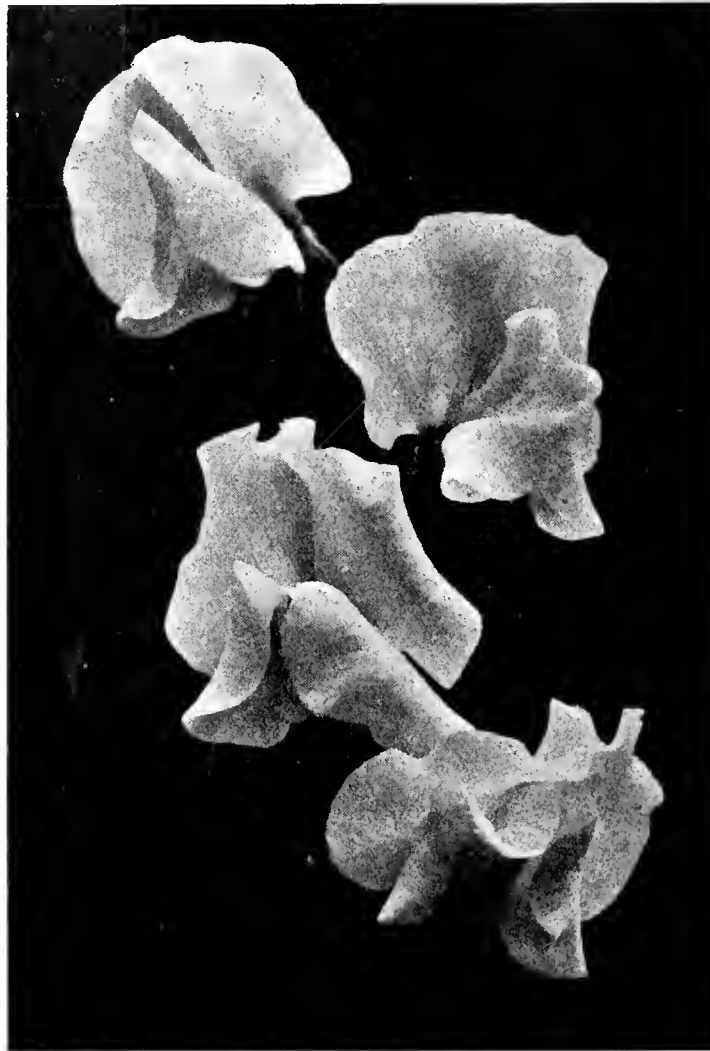
Club Judges.— In the dog world and the poultry world the "club judge" is an institution of the utmost importance, and I am of opinion that it would be an excellent thing if we could import the idea into the Sweet Pea world. It is clear from the awards made at some local shows that the impressions of some judges as to what constitutes a good Sweet Pea are weird, to put it mildly. The National Sweet Pea Society has now upwards of one hundred societies in affiliation, and for the benefit of these the desirability of drawing up a list of official judges cannot be questioned. The awards would then be made on a recognised approved basis in all parts of the country. One obstacle is that floricultural societies are not overburdened with cash, and they cannot always afford

to pay a competent man a fair wage for a fair day's work; but this I do not regard as insurmountable. It is not usually the fee which causes trouble, but the expenses, which rise to a respectable sum when one has to travel a few hundred miles and spend at least one night in an hotel. There are, however, scores of capable men in the country who could be retained at a reasonable fee, and who would not have to travel far.

HORACE J. WRIGHT.

SWEET PEA LADY MILLER.

Among Sweet Peas of recent introduction, this variety must take a foremost place. It is exceed-



SWEET PEA LADY MILLER.

ingly vigorous, flowers freely, and the blossoms are beautifully waved. It belongs to the cream pink section, the two colours being very delicately blended. Although there are now several good varieties in this colour section, all are very beautiful, and we cannot well have too many of them. When cut and bunched Lady Miller is particularly charming, and it is also very beautiful in the garden. If a census of Sweet Peas for colour were taken, we think those of cream and pink hues would be well on top. It was raised by Messrs. Dobbie and Co., and has been shown by them in very good condition this year.

THE KITCHEN GARDEN.

FRENCH SUGAR PEAS.

It is often remarked that we want more variety in vegetables, and this can be met by growing kinds that seem but little known. For instance, the French Sugar Peas are excellent when cooked whole, providing the pods are young and well grown. Last summer, being hot and dry, was very trying to the ordinary Pea crop in light soils, whereas the Sugar Pea was excellent. Of course, I would only advise its culture in a private garden, and even then only where variety or change of vegetables is desired, as it cannot be classed as a profitable vegetable. Being so little known or grown, it is not looked upon with great favour, yet it is an excellent summer vegetable in season from July to September. In poor land no lack of good food should be allowed at the roots. The soil must be deeply trenched and the plants given sufficient space to grow freely. The variety Mangetout may be classed as a medium grower. Last summer it did not attain a height of 3 feet, though in a wet season I have had it nearly 4 feet. W.

NEW VARIETIES OF ASPARAGUS.

Though most vegetables during the past quarter of a century have made wonderful strides, Asparagus has been almost stationary, so far as the introduction of new varieties is concerned. On the other hand, there has been great progress in its cultivation, and this is now more easy and profitable than it was some years ago. It may be well, however, to draw attention to a few new varieties. Objection may be made to this, as some may think it is desirable to grow the older sorts as well as possible, and in a certain sense I agree. On the other hand, I certainly think by the introduction of new blood we may get good results in the way of size, yield and earliness.

At the Royal Horticultural Society's Gardens at Wisley during last year some most interesting trials of Asparagus took place. But as all growers of this vegetable know, one, or even two, seasons'

trials will not be sufficient to prove conclusively any sorts as new or distinct. Although I believe the new varieties referred to were only two years old, there was a marked difference in the yield and size of growth over older sorts grown under similar conditions, so that there is great promise that the newer forms will prove superior and be valuable additions to a vegetable which almost everyone likes, and which is none too plentiful. For instance, an earlier variety will prove of great value, as when Asparagus comes in there is a scarcity of good vegetables. Some of the varieties under the name of Early Giant were greatly superior to the older sorts. G. WYTHES.

GARDENING FOR BEGINNERS.

THE LAYERING OF BORDER CARNATIONS.

THE border Carnations—that is, those which flower in the open ground during the summer months, are propagated by means of layers, and this is the time of the year in which to carry out the work. A few appliances are needed in order that the layering may be properly done, namely, a sharp, small-bladed knife, some pegs to secure the layers in their place, a small hand-fork to loosen the soil around the plants previous to layering, and a pad of some kind on which to kneel, for it is very necessary to come in close contact with Mother Earth. Carnation-pegs are sold for the purpose, but any piece of bent wire may be made to answer, besides which pegs may be cut from the stalks of Bracken or an old Birch broom. Long hairpins may also be used. Some good sandy soil passed through a sieve with a quarter-inch mesh is also required. This must be worked around the layer when it is fixed in position, and thus forms the medium into which the first roots are pushed.

How to do the Work.—All being ready, the actual layering may now commence. In the first place, the soil around the plant should be lightly forked up to a depth of a couple of inches or thereabouts; then take the shoot which is to form the layer, and with a downward pull remove any leaves from the lower part of the stem, as is shown in the accompanying illustration of a layered and rooted shoot. If the leaves are too firmly fixed, a sharp pair of scissors may be used. Then take the shoot in the left hand so that the bottom portion is uppermost, and support the stem with the forefinger. This will prevent any danger of the shoot snapping off when the cut is being made, and also enable the operator to regulate the extent to which the knife penetrates. It must be inserted about halfway through the stem immediately below a joint, and carried upwards to the next joint. If this is properly done and the shoot pegged down correctly, the separated portion of the stem assumes the character of a tongue or heel, and it is from this part that the roots are produced, as shown in the illustration. It is most essential that the cut remains open, otherwise the wound will heal without rooting, or do so only in an imperfect manner. Much might be written on the subject without conveying as clear an idea as a glance at the illustration. It is very important that the layered shoots are not too young and succulent, otherwise they are liable to snap, and much the same may happen if they are allowed to get too old and woody. Care should be taken not to crowd too many layers around a single plant, as it must be remembered that they will make more growth before they are fit to be separated from the parent, and consequently they will become weakened by crowding. Varieties of loose growth may have more layers put down than those with sturdy, compact shoots. When layering is completed, the soil should have a good watering through a fine rose in order to settle everything in its place, and

it is very essential that after this the soil is never allowed to get dry. Apart from this, an occasional overlooking to see that the layers are not loosened in any way, and also to keep free from weeds, are all that is needed till they are sufficiently rooted to be separated from the parent plant.

Treatment of Rooted Layers.—By the end of September the plants should be rooted sufficiently for them to be cut off, and then either planted into their permanent quarters or put into 4-inch pots, as in some districts they are frequently wintered in a cold frame. In cutting off the layers from the parent plant, a certain amount of care is very necessary. A sharp knife is required, and the buried portion of the stem should be cut by a downward thrust, as, if an upward cut is made, the stem is liable to break. Then with a trowel carefully lift the rooted layer, and shorten back the old stem

the advantage of a good top-dressing if applied to a lawn at once. The new soil will fill up all hollows and closely surround the roots of the grasses, and the latter will soon take possession of the additional loam and become stronger and more likely to pass through a severe winter safely. If closely examined, it will be clearly seen how bare of soil lawn grasses are at the present time.

The new compost should be of a gritty nature, and made moderately rich by adding some well-rotted manure. Pass all the ingredients through a three-quarter-inch mesh sieve and spread the mixture on evenly. Brush it to and fro, so as to gently work down the particles of soil, and then roll the lawn. So treated, the compost will not show on the surface, while at the same time it will be doing a vast amount of good to the lawn.



A CARNATION SHOOT THAT HAS BEEN PROPERLY LAYERED AND MADE ROOTS.

if it is too long. Whether planted in the open ground or potted, the young plants should have their roots exposed to the air for as short a time as possible, for the delicate fibres are very quickly injured. It is very necessary that the planting be firmly carried out, and, should the young plants be lifted by frost, it is most essential that they are again pressed into position as soon as it can be safely done.

H. P.

LAWNS AND DRY WEATHER.

ALTHOUGH many lawns have suffered a great deal owing to absence of rain and the excessive heat, it will surprise many persons when they see the rapid recovery some lawns will make. In numerous instances I find old, coarse grasses killed and others lessened in vigour considerably. No time should be lost now in raking off browned moss and faded coarse grass, and after the rake has been used to good purpose, follow with a half-worn path broom and brush up as much more as possible. Some crumbled soil will also be collected, but it is a very easy matter to replace it with fresh loam. This brings me to the main point in this note, namely,

pots, and, finally, to the flowering ones, those 7 inches in diameter. The same kind of compost must be used throughout, but finer in condition at the first than the two final pottings, viz., fibrous loam, two parts; leaf-soil, one part; rotted manure, one part; with sufficient coarse sand to render it all porous. To one bushel of the above combined parts add a 7-inch potful of old mortar-rubble. When the young plants are 6 inches high, pinch off the tops and thus cause side shoots to grow. A few plants may be left at this, as they will flower early; but others should be pinched twice. Then they will be later in flowering and so form a succession.

If a frame is available, the plants should be grown in it up to the time the flower-buds show prominently. Directly the plants are well rooted in their flowering pots, commence to feed them judiciously; later, weak doses of manure-water and artificial manures may be given; but at first clear soot-water is the best, and if applied at every second watering, both the colour of the flowers and the foliage will be improved. Some of the double whites and pinks are most useful for cutting and placing in vases.

SHAMROCK.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Border Carnations.—From the middle to the latter end of July is a very suitable time for layering the growths of these for providing next year's flowering plants and the plants to get thoroughly established. Before commencing to layer some fine soil should be got in readiness, and some pegs for holding the shoots firm. A compost of loam and leaf-mould, with a liberal addition of coarse sand, is preferable, though, failing that, old potting compost passed through a fine sieve will do.

Liliums.—Attend to the staking and tying of these as they extend, using neat stakes, nothing being better than Bamboos. The stronger-growing species will, of course, need stouter stakes in proportion. Where such as *L. auratum* and varieties are planted among Rhododendrons and the like, they will be greatly benefited by copious supplies of water and applications of liquid manure-water.

Montbretias.—The growths must be kept looped up or supported with twiggy branches, and where grown in lines the Dutch hoe should be worked frequently among them. On light soils a mulch will be of much value, but on heavier soil, and where the ground was well enriched and deeply worked, it is not so essential.

The Rock Garden.

The Dripping Weather we experienced during last month has caused a great many plants to make unusual growth, and many of the commoner subjects have exceeded their boundary. When overhauling for weeds and making tidy, any such subjects, if encroaching upon better plants, should be curtailed, and, if necessary, be taken up altogether.

Campanulas.—For flowering on the rock garden during July many of the dwarf Harebells are excellent and remarkably free, and are soon established where the soil is well drained. *C. pusilla* when massed together is a pleasing sight, as is also, at the time of writing, *C. G. F. Wilson*.

Helichrysum arenarium.—One of the most interesting plants now flowering, and remaining so for a considerable length of time, is this alpine Everlasting. It is of free growth in almost any position, but seems to delight in plenty of sun, when the stems holding the heads of yellow rustling flowers are more freely produced.

Plants Under Glass.

Mignonette.—With a little care and attention, more particularly to watering than anything else, it is quite easy to have pots of this fragrant flower in the winter months, and nothing is more delightful for the decoration of the greenhouse. Seed may be sown now, and another batch or two at intervals of a fortnight or a month. Sow a pinch of seed singly into small pots, and have the latter cleaned, drained, and filled with a nice sweet compost of loam, leaf-mould and coarse grit or sand. Stand in a frame and admit air freely, especially when the seed has germinated, and as soon as the seedlings are large enough, thin out to the best. The plants must be grown sturdily throughout, and potted as becomes necessary.

Solanum Wendlandii.—Among greenhouse climbers this is one of the showiest, especially when the young growths with their flowers are allowed to hang down. For this reason the tying in should not be too severe. Give copious supplies of water to the roots, and occasional waterings with liquid manure-water.

Cyclamen.—A frame with a north aspect will suit the plants admirably now for the time until they are housed. Give abundance of air, removing the lights whenever possible, and in warm localities the lights may be drawn off on mild nights. To encourage growth, syringing must be regularly practised and the growth kept free from thrip, and occasionally rearrange the plants, rake over the ashes and give a dusting of soot.

The Kitchen Garden.

Winter Greens.—Up till the end of the month the later plants of the various Kales, Savoys and Broccoli may be planted. Well water in, and if the weather is dry, water previous plantings.

Turnips.—Make good sowings of Turnips where vacant ground can be found for autumn and winter crops. Thin out earlier sowings at intervals.

Keep the hoe working among them, and dust with soot in the early morning when the weather is showery. For the present sowings select a somewhat shaded position.

Late Peas.—These will greatly benefit by dampings overhead on mild evenings and a mulch of manure or long litter applied to the surface of the soil. If the weather is dry, water copiously, as drought is conducive to attacks of mildew, which will play havoc with the crop. If the ground is hard, the surface should be lightly loosened on either side of the rows before watering.

Fruits Under Glass.

Melons.—The plants in heated frames that are swelling their fruits must not be allowed to suffer for the want of water, and, to encourage the fruits to swell freely, varying stimulants should be afforded. The fruits should be elevated from the soil so that they do not become disfigured by insect pests, and the foliage kept well syringed to keep it in a healthy and clean condition. The lights may be well elevated during the hottest parts of the day, closing in the afternoon, according to the weather. Remove lateral growth so that it does not become too congested, and have a slight circulation of heat in the water-pipes at night. For the latest crop in the house sow seed at once, if this has not already been attended to, and raise quickly in the usual manner.

Figs.—These make a quantity of growth at this season, and thinning is necessary, or overcrowding will result. Where the trees are cropping freely, and especially in restricted borders, watering and feeding must be done liberally and a heavy mulch afforded the borders. Thoroughly syringe the foliage to keep it in a healthy condition and free from spider. At this season of the year little fire-heat is wanted, and during hot days abundance of air may be afforded the trees. A little shading stippled on the glass will be beneficial.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Watering.—A few days of heat at this period causes some plants to suffer for the want of water, *Astilbes Davidii* and *grandis*, *Rudbeckia speciosa*, *Lobelia cardinalis* and *Phloxes* being peculiarly susceptible to drought. One should not wait for the plants to show distress, but give liberal douchings before that. I always add manure to the water, which carries the plants longer than pure water, and it has the further advantage of adding lustre to the colour of the flowers. Hard water is not to be recommended.

Herbaceous Borders.—Shorten the stems of *Rudbeckia laciniata* varieties grouped without stakes. Flowered-out single-stemmed plants of *Aconitum Napellus* may be rooted out to give others more space. *Helianthus* growing too close should be thinned. Perennial Poppies, such as *Papaver rupifragum* and *pilosum* will need much attention, cutting out the old stems so as to encourage the new to fill up. *Anchusa italica* varieties need much the same treatment when they flower to the end of the season.

Gladiolus.—Short stakes should be placed to these before the spikes lengthen out. This enables them to maintain an upright position without having to use longer and ugly stakes later. They much appreciate manurial dressings and a fair supply of moisture in dry weather, but continued wet and cold are hurtful and lead to disease in the corms.

Shrubs.

Hedge-Trimming.—Where there is much of this work to overtake, a commencement may be made, choosing dull weather for the operation. A hedge should invariably be cut with a slight taper, which keeps it from sagging, and, if not overdone, cannot be noticed.

Box Edgings.—Those in old-fashioned flower gardens with gravel walks between the heds may also be cut at this time. The edgings are most in character when cut square-topped, with upright edges so as to appear like dwarf hedges. The very slightest inclination of the sides towards the upper edges should also be made in these.

Philadelphus.—The varieties derived from *P. microphyllus*, such as *Lemoinei erectus*, will now be out of flower, and need the old flowering shoots to be cut back somewhat to give space for the young ones. Pruning, moreover, stiffens the shoots, which in this and some other sections, e.g., the late-flowering *grandiflorus*, are apt to become very straggly if allowed to grow unchecked. The young growths strike root as freely as *Verbenas* when taken at this time of year and the cuttings dibbled in sand or Cocoonat fibre waste in a propagating-pit. *P. roseiflorus* and *P. purpureo-maculatus* are perhaps the two finest varieties.

Fruit-Houses.

Tomatoes.—These usually make more foliage than is of utility, and besides the side axillary growths, which must be rigidly suppressed, a portion of the leaves may also be removed with advantage and the others shortened. While in full growth the plants ask for abundance of water at the root with regular supplies of manure, but with a dry, airy atmosphere. In some structures it is essential to shade the plants on very hot days, else the foliage gets browned and curled up.

Cucumbers.—These can be kept in a healthy and free-bearing condition for a long time by means of judicious pinching, light cropping, removal of damaged foliage, and surface-dressings of rough turf and manure; but it is now worth while to sow seeds or strike cuttings in order to have a young stock to replace any that may give way next month when the nights get cold.

Grape Vines.—Lady Downe's will now be forward enough to be liable to scorching in tightly-glazed houses. Besides airing freely, late and early, a very slight shade over all the roof is advantageous. Muscats at this season are also liable to scorch, and the same means must be adopted. If the temperature should run too low at some hours, the pipes must be heated, but usually this is not essential provided time can be given for the fruit to ripen.

The Vegetable Garden.

Jerusalem Artichokes.—It does no harm to the crop to stop the stems, which saves them from being blown about by the gales which we experience sooner or later. A little soil thrown up the stems by means of a spade also helps to steady them.

Leeks.—These are now growing rapidly, and it will be necessary to determine whether the ridges may be levelled down or left for a few weeks longer. Those started in January will need fairly constant attention to tying up with thick brown paper, and watering with a weak solution of liquid manure poured through drain-tiles terminating near their roots.

Parsley.—Early-raised plants set out at wide intervals will now be well forward. There is a danger of coarsening the foliage if manure is applied; but should the plants show by the colour of the leafage that manure is needed, apply a slight dressing of soot, and hoe it into the surface of the ground. It is not too late to sow seeds for a spring crop, which sometimes comes in useful after a severe winter.

The Plant-Houses.

Roman Hyacinths.—As soon as the bulbs come to hand, put up some for early flowering. Six-inch pots are suitable, and the bulbs may be arranged so as to nearly touch each other. Those at 20s. per hundred are to be preferred to cheap ones, which produce only one spike and sometimes none, an average of four from first-quality bulbs being usual. Water and place in a frame, covering with some material that will keep moist.

Narcissi.—Home-grown bulbs lifted a few weeks ago may now be potted or boxed, the soil well moistened, and the whole stood in a sheltered and shady position. A very slight covering of cinder-ashes is sufficient for these. Good varieties are *Golden Spur*, *Victoria*, *Telamonius plenus* and *Glory of Leiden* for early flowering; and for later, *Emperor*, *Sir Watkin*, *Horsfieldii*, *Mme. Plomp*, *Sulphur Phoenix* and *ornatus*. Hyacinths and Tulips should be ordered without further delay. The earliest Hyacinths are *General Pelissier*, *Mme. van der Hoop* and *Charles Dickens*; and of Tulips, setting aside *van Thols* in variety, *Proserpine* (perhaps the best of all), *Thomas Moore* and *Crimson King*.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

SOCIETIES.

NATIONAL SWEET PEA SOCIETY.

JULY 9 AND 10.

THE twelfth exhibition of this popular flower was held in the Royal Horticultural Hall, Westminster, on the above-named dates, and obviously was a signal success. This was so from every point of view, though more particularly, perhaps, from the spectacular standpoint, and because of the added beauty to such an exhibition during recent years of many entirely new or greatly-improved shades of colour. This greater diversity of colour is in reality a great gain not to exhibitions only, but to the garden and, in turn, to decoration. Hence the scene, the product of a solitary type of flower, was as remarkable as it was good. The interest taken in the exhibition and the flower may best be gauged from the fact that competitors to the number of 180 came from all parts of the British Isles. Particulars of the show are appended. The general arrangements were admirable.

SUTTON CUP CLASS.

In this class, for twenty-one bunches of Sweet Peas, distinct, to be selected from the varieties recommended by the floral committee in the Classification List, the first prize was won by A. W. Stirling, Esq., Holme Lea, Goring, Oxon, whose splendid lot contained Thomas Stevenson, Gladys Burt, J. Ingman, Nubian, Sunproof Crimson, Tennant Spencer, Evelyn Hemus, Mrs. Harcastle Sykes, Earl Spencer, Flora Norton Spencer, Florence Nightingale (fine lavender), Elsie Herbert, Paradise Ivory and America Spencer. Second, C. Hopton, Esq., The Cottage, Greenford, with a collection of much less fine flowers. Three of the finest collections in this class were disqualified owing to the presence of double standards, which were distinctly forbidden by the conditions. There were seven competitors, some groups being very fine.

For twenty-four bunches of Sweet Peas, distinct, the first prize went to Mrs. A. E. Kensington, Haversbrack, Uckfield, whose best vases were Mrs. W. J. Unwin, Scarlet Emperor, Clara Curtis, Mrs. Harcastle Sykes, Barbara, Nettie Jenkins, Red Chief, Helen Grosvenor, Elsie Herbert, Flora Norton Spencer and Senator. Second, A. W. Stirling, Esq., Holme Lea, Goring, Oxon. Some of the finer exhibits in this class also were disqualified because of the presence of double standards.

HENRY ECKFORD MEMORIAL CLASS.

In this class, for twelve bunches of Sweet Peas, distinct, named varieties in commerce, the first prize was won by E. G. Moccatta, Esq., Woburn Place, Addlestone (gardener, Mr. Thomas Stevenson), whose grand lot comprised Melba, Hercules, Edrom Beauty, Queen Mary, Thomas Stevenson, J. Ingman, Queen of Norway, Elfrida Pearson, Mrs. C. W. Breamore, R. F. Felton, Elsie Herbert and Marjorie Linzee. A magnificent lot of particularly bright flowers, that were, however, subsequently disqualified, owing to the presence of a double standard. The cup then went to Sir Randolph Baker, Bart., M.P., Ranston, Blandford (gardener, Mr. A. B. Usher). Barbara, Lavender George Herbert, Evelyn Hemus, King Manoel and Doris Usher were of exceptional merit in a group of much excellence.

Six bunches of new Sweet Peas, distinct, selected from varieties first put into commerce since the autumn of 1911. First, Mr. Edward Cowdy, Longhall, County Armagh. Dobbie's Cream, King Manoel, R. F. Felton and Mrs. Cuthbertson were the best.

Three bunches of pink or cream pink Sweet Peas, waved, distinct: The first prize was awarded to F. Chetwynd Stapleton, Esq., Englefield Lodge, Englefield Green, whose vases were of the varieties Mrs. R. Hallam, Miss Chetwynd Stapleton and Mary Langdown. Three charming varieties. Second, R. P. Brooks, Esq., Rosehill, Par Station, Cornwall. Mrs. Hugh Dickson and Hercules were the best. Third, Sir Randolph Baker, Bart. There were eleven competitors in this class also.

For three bunches of Sweet Peas, distinct, with double standards, Mrs. A. E. Kensington, Uckfield, was first with Audrey Crier, Scarlet Emperor and Orange Perfection; second, Sir Randolph Baker, Bart., who had Dobbie's Cream and Mrs. Breamore as his best; third, Dr. J. E. Phillips, Malpas. There were seven competitors in this class, the quality being very fine.

OPEN TO ALL—CLASSIFICATION CLASS.

Collection of twenty-four varieties of Sweet Peas (not more than one variety of any colour given in the Classification List may be shown): The first prize went to Mr. J. Stevenson, Poole Road, Wimborne, whose vases of Princess Victoria, Earl Spencer, Florence Nightingale and Thomas Stevenson were very fine; second, Mr. H. D. Tigwell, Harrow View, Greenford. There were four exhibitors, the class being a most effective one.

For twelve bunches of Sweet Peas, distinct, the first prize went to Mr. F. G. Bealing, Burgess Street Nurseries, Bassett; second, C. B. Gabriel, Esq., Horsell, Surrey; third, E. Otter, Esq., Stanhope Park, Greenford. In each instance the class cards bore this legend: "As all exhibits in this class contain double standards, the judges recommend" the prizes as above.

Three bunches of seedling Sweet Peas, distinct, to consist of varieties not yet in commerce (the exhibitor must be the raiser of the varieties, and each to be named): First, Mr. R. Bolton, Carnforth, who had Andrew Aitken (salmon), Agriola (blush lilac and mauve) and Birdbrook (maroon, waved fancy); second, A. W. Stirling, Esq., Holme Lea, Goring, Oxon, who had Cissie (mauve), Mrs.

A. W. Stirling (cerise) and Hotty (lilac blush); third, Mr. Robert Wright, Halsall Lane Nursery, Formby.

E. W. KING CHALLENGE CUP.

For twelve bunches of waved Sweet Peas, distinct, the first prize went to Alfred F. Blades, Esq., Rookfields, Reigate, with splendid vases of Melba, Hercules, Edrom Beauty, Othello Spencer and Flora Norton Spencer; second, R. P. Brooks, Esq., Rosehill, Par Station, Cornwall. This class was well contested.

Six bunches of Sweet Peas, distinct: First prize, R. P. Brooks, Esq., Par Station, Cornwall, whose best were Doris Burt (scarlet), Mrs. W. King (cerise), Isobel Malcolm (cream) and Dazzler; second, Sir Randolph Baker, Bart.; third, Mr. Thomas Jones, Ruabon.

Six bunches, distinct, double standards: First, Mr. F. G. Bealing, Bassett. Bertrand Deal, Duplex Spencer, Clara Curtis, Sunproof Crimson and Elfrida Pearson were included. Only one entry.

Three bunches of Sweet Peas, distinct, Helen Pierce type, waved or grandiflora varieties: First, Mr. H. H. Lees, Warlington, Havant; second, Messrs. Faulkner and Aitkins, Barrow Road Nurseries, Tarvin, near Chester; third, Mr. T. Cross, Bury St. Edmunds.

BURPEE CUP CLASS.

A display of waved Sweet Peas, to be arranged on a space 8 feet by 3 feet, and not to exceed 4 feet in height: First, Mr. A. E. Alsen, Denmead, Waterlooville, for an admirable lot; second, F. A. Wellesley, Esq., J.P. Woking; third, Mr. C. W. Breamore, Winchester. All the exhibits in this class were disqualified under the double-standard clause, the prizes being recommended as above. There were eight splendid tables arranged, the whole constituting a great attraction in the centre of the hall.

DISTRICT CLASSES.—LONDON COUNTY CLASSES.

Six bunches of Sweet Peas, distinct, at least two to consist of varieties first put into commerce during or since the autumn of 1911. The only exhibitor was disqualified for showing mixed bunches.

SCOTTISH CLASS.

Six bunches (conditions same as last): First, Mrs. Dunbar of Dunbar, Seapark, Forres, N.B. Only two exhibitors, one being disqualified for double standards.

IRISH CLASS.

Nine bunches of Sweet Peas, distinct (under similar conditions): First, Mr. Edward Cowdy, Longhall, County Armagh, who had excellent examples of White Queen, Mrs. R. Hallam and Tennant Spencer; second, Mrs. James Hall, County Tyrone.

WELSH CLASS.

Under similar conditions: First prize, Mr. J. E. Alan Gibbs, Dinas Powis, Glamorgan, Nancy Perkin and R. F. Felton being good; second, Mr. Thomas Jones, Bryn Penylan, Ruabon.

NORTHERN COUNTIES CLASS.

Under similar conditions: First, Dr. J. E. Phillips-Malpas, Cheshire, Clara Curtis, Flora Norton Spencer and Queen of Norway being good; second, Mr. J. F. Harrison, Ulverston.

WESTERN COUNTIES CLASS.

There was only one entry in this class, the first being given to R. P. Brooks, Esq., Rosehill, Par Station, Cornwall. The prize in this class was a "recommended" only, a double standard being found in the exhibit.

EASTERN COUNTIES CLASS.

First, F. E. Hall, Esq., Redbourn, Edna Unwin, Mrs. Hesington, Hercules, Dobbie's Cream and Flora Norton Spencer were all grand. Second, Sir M. Turner, Bedford, Romford. Thomas Stevenson, Elsie Herbert, Nubian, and Sunproof Crimson were excellent. There were twelve competitors.

MIDLAND COUNTIES CLASS.

First, Mr. Robert Hallam, Radcliffe-on-Trent, who had Clara Curtis, Nettie Jenkins and Hercules in splendid form. Only two entries.

SOUTHERN COUNTIES CLASS.

First, E. G. Moccatta, Esq., Woburn Place, Addlestone (gardener, Mr. Thomas Stevenson), who staged a grand lot of flowers. His best vases were Barbara, Mrs. Routzahn, Lady E. Eyre, Money-maker, Marjorie Linzee, and Mrs. C. W. Breamore, Scarlet Emperor being particularly fine. Second, Sir Randolph Baker, Bart., M.P., Blandford; third, A. L. F. Cook, Esq., Iver, Bucks.

BREAMORE CHALLENGE CLASS.

Twelve bunches, distinct, named varieties in commerce: First, Mr. Edward Cowdy, Greenhall, County Armagh, who had a really grand lot. Wenroe Castle (bronze and blue), Barbara, Mrs. R. Hallam, White Queen, Gladys Burt and Lavender Queen were all superb. There were only two exhibitors, the second prize going to Marshall Y. Green, Esq., Eynsford.

Six bunches, distinct: First, Mr. W. H. Smith, 12, George Street, Hailsham, Sussex. Sunproof Crimson, Masterpiece, Hercules, Freda, President and Aurora constituted this fine lot. Second, Mr. J. A. Newman, Elm Grove Road, Weybridge, who had a splendid set, Nettie Jenkins, Helen Lewis and Thomas Stevenson were all good. Third, H. St. J. Cavell, Esq., Cheam.

The Hawmark Challenge Cup class, for twelve bunches, was keenly contested, and was won by Mr. T. Jones, Ruabon, who had splendid quality bunches of Sunproof Crimson, Lavender George Herbert, Elsie Herbert, Hercules and Queen of Norway. The second-prize stand could not be found; while Mr. J. Hall, Moy, County Tyrone, was placed third.

For six bunches Mr. W. H. Smith, 12, George Street, Hailsham, won first prize with effective examples of White Queen, Hercules, Mrs. De-lington, Sunproof Crimson and Majestic. It was followed by Dr. G. S. Leggatt, Thompson Road, Harpenden, having Melba, Hercules, Sunproof Crimson and Countess Spencer as his best examples; while Mr. A. Everett, Fairview, Chappel, Essex, was third.

For three bunches there was a host of entries, Mr. W. H. Smith winning with A. Unwin, Queen Victoria Spencer and John Ingman; and Mr. M. P. Cressey, Oak Manor, Tonbridge, third.

There was a rare tussle for the Horace Wright Challenge Cup. This was, however, secured by Mr. W. H. Holloway, Percyville, Port Hill Gardens, Shrewsbury, who staged splendidly, some of his best being Thomas Stevenson, William Bolton, Mrs. C. W. Breamore, Mrs. Charles Foster, Elfrida Pearson, Queen of Norway and Barbara. The second prize fell to Mr. F. Green, The Beeches, Swaythling, Southampton, who had capital vases of Melba, Doris Usher, Lady Eyre and Hercules; while Mr. C. R. Jaggs, Hertford Heath, was a fine third.

The Walter Voss Challenge Cup, for six varieties, was won by Mr. E. J. Gee, Broadway, Chesham, with a good, level display. Mr. H. Hesford, Addlestone, followed; and Mr. G. Pain, 64, Linzee Road, Hornsey, brought up the rear.

For six vases of waved varieties Mr. E. D. Marshall, Early Rise Arms, Reading, was awarded first prize with fine specimens of Nubian, John Ingman, Maud Holmes, Constance Oliver and Tennant Spencer. Mr. C. R. Jaggs was second; and Mr. W. T. James, Kempton Hoo, Bedford, third.

For three bunches Mr. E. D. Marshall led off with Mrs. H. Sykes, Thomas Stevenson and Stark's Queen; followed by Mr. W. Mousley, Fairholme Road, Ashford; while Mr. G. H. Guy, Reigate, brought up the rear.

For two bunches of cream pink varieties Mr. W. Mousley won first with excellent examples of Constance Oliver and Doris Usher; while Messrs. E. N. Sears and F. Green secured the other prizes in the order named.

DECORATIONS.

Mrs. F. G. Bealing, Bassett, won first prize for an epergne, using a combination of blue and cream with suitable foliage; second, Mrs. A. Duff, High Street, Charnbrook; third, Miss J. G. Cuthbertson, Mark's Tey.

The first prize for a vase went to Mrs. W. Maslin, Orchard Hill Cottage, Addlestone, for a tasteful arrangement. Mrs. A. R. Bide, Farnham, was second, and Mrs. F. G. Bealing third.

There were fourteen entries for a dinner-table decoration. Mrs. W. Puleher, jun., 21, Moulsham Street, Chelmsford, won first prize; second, Mrs. A. Duff, High Street, Charnbrook; third, Mrs. A. Everett, Chappel, Essex.

There were twelve entries for two button-holes and one spray, the first prize going to Miss J. G. Cuthbertson; second, Miss Kitty Ackers, Huntley Manor, Gloucester; third, Miss B. E. Armstrong, Fish Pond Road, Hitchin.

AWARDS.

Awards of Merit.—To R. F. Felton, a very fine lavender waved variety, the flowers nicely placed on the stems, from Mr. R. Bolton; to Aricole, a pale lavender edged with a deeper shade of the same colour, very fine flowers, from Mr. R. Bolton; to Decorator, a rich rosy cerise, flowers large, with fine waved petals, from Messrs. G. Stark and Son; to Bertrand Deal, a fine rosy lilac form with well-placed flowers, from Mr. Bertrand Deal; and to Lady Miller, a cream variety suffused rosy pink of a pleasing shade, from Mr. I. Malcolm.

NON-COMPETITIVE EXHIBITS.

The trade groups were arranged right round the wall of the hall, each exhibitor having the same space. Many of them made the most of it by ascending 10 feet or more high. Messrs. J. King and Sons, Coggeshall and Reading, presented a tasteful exhibit, having a large arch in front covered with fine varieties. Some of the best sorts were Gladys Burt, Hercules, Evelyn Hemus and Edward Prince of Wales.

Messrs. Dobbie and Co., Edinburgh and Mark's Tey, had some splendid Sweet Peas arranged beautifully between trails of Smilax and Asparagus. The most prominent varieties were Melba, Decorator, Inspector, Lady Miller, Thomas Stevenson (very fine), Lavender George Herbert and Mrs. H. Dickson.

Messrs. S. Bide and Son, Limited, Farnham, presented a telling exhibit, which included Waved Prince Olaf, R. F. Felton, Jeannie Gordon Spencer, Barbara, St. George and Florence Nightingale.

Mr. W. O. Cantley, Bury St. Edmunds, had a pleasing exhibit, consisting of three tall columns with vases displayed round them. Melba, Prince George, Hercules and Charles Foster were good here.

From Messrs. Aldersey and Marsden Jones came an effective stand, though it could not be said that the blue drapery improved it. Their chief varieties were Romani Ranni, Tortoiseshell, Moonstone, Sycera Lee and Beryl.

Messrs. Barr and Sons, Covent Garden, had a fine exhibit in which were noted such varieties as Barbara, R. F. Felton, Nubian, Scarlet Monarch, Thomas Stevenson and Mrs. J. C. House.

Messrs. W. Voss and Co., Millwall, also had a fine decorative exhibit, with Edith Taylor, Barbara, Rosabelle and Mrs. W. J. Unwin as some of the best features.

Messrs. G. Stark and Son, Great Ryburgh, had a good display of fine-quality Peas, especially the varieties The Lady, Decorator, Maggie Stark, Helen Williams and Primrose Beauty.

The exhibit of Robert Sydenham, Limited, Birmingham, was nicely displayed in rustic arrangements. Their

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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*The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.*

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Roses in Saughton Park, Edinburgh.—The Saughton Hall Park, Edinburgh, continues to develop in value and in beauty under the management of Mr. M'Hattie, the Edinburgh City gardener, and among the interesting and beautiful features are the old gardens of the Saughton Hall Mansion included in the park. The Rose garden is now very fine, and a number of members of the Town Council and other friends visited the park on the invitation of Councillor Inches, convener of the Parks Committee, on July 12. They were very much pleased with what they saw, and the Rose garden in particular was greatly appreciated. Various improvements tending to the comfort of the public are in contemplation.

Show of Forced Spring Bulbs.—A special exhibition of forced spring bulbs will be held on Tuesday and Wednesday, March 4 and 5, 1913, by the Royal Horticultural Society, the object being to demonstrate the varieties best suited to gentle forcing. Exhibits of small and large collections are invited from amateurs and the trade. Royal Horticultural Society medals will be awarded according to merit. The Council also offer (subject to the general rules of the society) a number of prizes presented to them by the General Bulb Growers' Society of Haarlem for various exhibits of Hyacinths, Tulips and Daffodils. Full particulars of these can be obtained from the secretary of the Royal Horticultural Society, Vincent Square, Westminster.

Silver Trophy for Amateurs' Rock Gardens.—On Wednesday, May 14, 1913, the Council of the Royal Horticultural Society will offer a silver trophy, presented to them by Mr. Clarence Elliott of Stevenage, for an exhibit of alpine and other plants suitable for a rock garden. These are to be arranged with rockwork as a rock garden in a space 6 feet by 3 feet. There must not be less than eighteen or more than twenty-four species or varieties. The first prize will be the Clarence Elliott Trophy. The Council will award a suitable medal according to merit, at their discretion, to the exhibitor adjudged second, and possibly also to the third. It is pleasing to note that at last the Council have realised the folly of holding a show the day after a Bank Holiday, and are holding the show referred to above on the Wednesday instead of the Tuesday following Whit-Monday.

Rose Lady Godiva as a Weeping Standard.—Surely this is the loveliest of all Roses grown in this form. What a cool, refreshing colour it is, one of the daintiest of blush pinks; and having this variety we want neither Christian Curle nor Dorothy Dennison. Weeping Roses are bound to be largely planted. There is nothing so beautiful as a well-developed weeping standard of the

wichuraiana Roses, and there is now variety enough for the most exacting. Up to the present Shower of Gold has been very disappointing in this form. The buds seem to live, but fail to unite to the Briar. There is still room for a really good yellow that keeps its colour well when fully out. Gardenia is fine, and probably Klondyke will be good. Aviateur Blériot is a glorious orange colour in the bud, but pales on opening. One of the best of the orange section is Desiré Bergera, a real gem, and one deserving of very extensive planting. It is a deeper-coloured form of Leontine Gervaise, one of our most fragrant ramblers as well as one of the loveliest colours.

Kent Commercial Fruit Show.—The second Kent Commercial Fruit Show will be held at the Corn Exchange, Maidstone, on October 29 and 30. The number of classes has been increased and several important alterations made. All the classes for six boxes of a variety have been opened to Great Britain and Ireland; by this it is hoped that numerous exhibits will be sent from the other fruit-growing districts, and that their methods of packing and grading will be represented. Other new features include classes for Apples Worcester Pearmain and Lord Derby, and also one for Pears, Messrs. Coupe and Sons, Covent Garden, London, have very kindly presented a challenge cup, value 20 guineas, for the best exhibit of six boxes in classes for Bramley's Seedling, Newton Wonder, Lane's Prince Albert, Blenheim Orange and Worcester Pearmain coming from Kent, Surrey or Sussex. The hon. secretary is Mr. R. Wellington, The College, Wye, Kent, from whom full particulars can be obtained.

The Spanish Broom.—A great deal is to be said in favour of the extended cultivation of Spartium junceum, the yellow-flowered Spanish Broom, for it continues in bloom for a considerable period from the beginning of July, and never fails to bloom profusely. As a rule, it is met with from 5 feet to 8 feet in height, but its height and habit depend almost entirely upon the will of the cultivator. Some people prefer to see freely-grown plants, and such may be obtained with a diameter of 5 feet or 6 feet. Others prefer to see their plants more compact in habit, hence the practice of cutting them severely back to near the base of the previous year's growth each spring, which encourages a rather stiff, globular habit, the plants at flowering-time being perfect globes of gold. In whichever way the plant is to be grown eventually, it is necessary to be rather severe with the pruning-knife in the early stages, otherwise the plants become very leggy. For the wild garden or for planting on dry, sandy banks, the Spanish Broom is excellent, for it does not require anything in the way of rich soil or elaborate cultivation. Seeds may be sown in pots, and the young plants must be kept in pots until planted in permanent places.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The "Breaking" of English Iris.—In my note on this subject which appeared on page 362 of last week's issue, the Iris under question was referred to as *I. Niphium*. This should have been *I. xiphioides*.—J. JACOB.

Curious Laburnums.—There is an interesting half-column of reading under the above title in the issue for June 22 of THE GARDEN. As the Editor mentions there are some examples of *L. Adamii* at Syon House, may I also record having seen this plant at two other places? One was at Fonthill House Gardens, Tisbury, Wilts; the other in a small garden at Fortis Green, East Finchley, N. Both were well-grown trees of the usual Laburnum size.

Rose Marquise de Sinety.—Like "Avon," I, too, would add a word in praise of this lovely Rose, most particularly because of its unique colour. True, it has not yet proved very free in flowering with us, but this may be remedied with age. Its growth is reasonably strong, with glossy bronze green foliage, while the flower passes, as it opens, from yellow to a bronzy shade, as "Avon" has it, "a much-needed colour in the Rose world."—C. T., *Highgate*.

Dwarf Double Crimson Sweet William.—Two years ago I found a large plant of this in an old garden, and from the cuttings taken from it I have now a most effective border to two long Rose-beds. This Sweet William is quite dwarf; the foliage makes a cushion of green, and the rich double crimson flowers only grow 5 inches or 6 inches high. It lasts a long time in flower, and should make a most useful plant for the rockery or for edging beds or borders. I would be glad to know if it is uncommon?—(Mrs.) F. E. LLOYD, *Croghan House, County Roscommon*.

Roses Excelsa and Crimson Rambler.—As these two Roses flower almost at the same time, one is tempted to refrain from adding the first-named, as, of course, Crimson Rambler is established in nearly every garden. But while I wish to be fair to our old friend, I must say there is no comparison as to its usefulness. While we have perhaps a little more brilliant colouring in Crimson Rambler, it is minus the elegant growth and beautiful foliage of Excelsa. It is one of the best of our crimson weepers—certainly a great rival to Hiawatha and Delight; and while I think even Excelsa may be eclipsed by Mr. Turner's Coronation, I have yet to prove it outdoors. I have Excelsa, which has made quite a small arbour in two years. It is a very rapid grower, and pays well for being spread out as much as possible.—P.

Exhibiting Daffodils.—Mr. Jacob certainly has put in another "word"; he owns it is a hard word, and I had to refer to the dictionary to find a meaning. "Mix" is clear enough, but "mycetic." Well, all I can find is "mycetes," which means "a genus of American monkeys, commonly called 'the howlers' from the loud sounds of their voices." so I take it to mean a sort of mixture of howling monkeys. Oh! Mr. Jacob, how can you use such expressions when talking about our lovely Daffodils! Really, I am quite shocked. But seriously, to try to follow Mr. Jacob's meaning: he says that the show flower and the garden flower are two distinct things, to be treated differently and to be thought of differently; that we are muddling things up, that there are flowers which are right either way,

the lucky dogs (monkeys, surely), these "mixomyctic" flowers, which he says are neither fish, flesh, fowl nor good red herring. Really, my poor brain begins to whirl. But to return to the point. What we want, as Mr. Jacob says, is a National Daffodil Society, but it must be "National" in the true sense of the word and exist to encourage the sort of flower that is wanted by the public, and not be a kind of mutual admiration society of so-called true florists. I myself sincerely hope the Daffodil will never enter the select circle of the "florists' flowers." I am delighted to hear that experience has taught "A Small Exhibitor" that faking is safe to be penalised in competitive classes. I take off my hat to those judges.—W. A. WATTS. [Myxomyctes is a genus of slime fungi that were at one time classed as animals, but are now regarded as plants. The slime fungus that causes finger-and-toe disease of cabbages belongs to the family.—ED.]

Privet Flowering Freely.—I have never seen Privet so well flowered as it is this year. The variety *angustifolium* has very large heads of blossom where the plants have been allowed to grow uncut for several years past. Of course, the wood was exceptionally well ripened last year, which accounts for the exceptional freedom of flowering this year. On some of the railway banks near Bournemouth, the Privet bushes—many of them large ones—are white with blossom. In other parts of this neighbourhood the *Enonymus* is also flowering well.—G. G.

Sweet Cherries.—These are fine, large, and of good flavour this year. When well protected by fine-meshed netting they can be kept for a long time, and if the sun is extra powerful, a thin shading of canvas or tiffany should also be used in order to prolong the season. I have kept them for the Scottish season in this manner. Among some of the best are Bigarreau de Schrecken, Bigarreau Napoleon, Early Rivers, Frogmore Early Bigarreau, Governor Wood, Geant de Hedelfinger and Black Eagle. For kitchen use May Duke and Morello are two of the best.—W. A. COOK, *Leonardslee Gardens*.

Erigeron Asa Gray.—Under this name there is being cultivated a very distinct *Erigeron*, about whose origin one would like to know more, as it seems, for the present, to be wrapped in obscurity. If one dared venture upon a conjecture, it is that it may be a hybrid of *Erigeron aurantiacus*. It is not to be confounded with the plant sold as *E. salsuginosus* of Asa Gray, which is quite a different thing. The one under notice grows almost a foot high in ordinary soils, and has flowers hardly the size of those of *E. glaucus*, but of a real biscuit colour and with an orange centre. The description of the colour may not appear attractive, but the plant is quite a pleasing one, especially when it has attained some size.—S. ARNOTT.

Rustic Trellises as Wind-breaks.—Very recently a gentleman pointed out to me some Peas growing at the edge of a cliff 100 feet high. The only protection the Peas and other crops received was afforded by a rustic trellis about five feet high. At times the gales were very strong, but the Peas and other crops were quite undamaged and looked very well indeed. Not far away, however, a wall was built as a protection for garden crops against the strong winds from the sea, but the crops were badly damaged through the wind sweeping over the top of the wall in a cold current. The rough trellis in the first-named garden broke the force

of the wind, and there was no concentrated current blowing directly on the plants. I remember, some years ago, a hedge of *Laurustinus* forming the boundary fence above a low stone wall of a garden near the sea. There the gales were exceptionally strong at times, and the plants suffered considerably. A gentleman recommended the owner to fix wire-netting of half-inch mesh about two feet away from the bushes or hedge. This was done, and in about two years' time the *Laurustinus* had regained their normal good health, were growing freely and producing plentifully nice, young shoots. Unless one sees the good results, one can scarcely believe that such protection will be as beneficial as it is.—B.

The Double Standard in the Sweet Pea.—In view of the editorial remarks appended to my note on page 362 of last week's issue, I would like to add another word. Our esteemed Editor remarks that the National Sweet Pea Committee "recognised that the double standard had come to stay, and provided three classes for it, but rigidly, and we think rightly, excluded it from the other classes." If, however, the society recognised that the "double standard had come to stay," its present action is a little strange, since what it excludes to-day it must perforce, in such circumstances, admit to-morrow. Curiously, too—and very curiously—in those classes where, according to schedule, the double standard was admissible, no adequate response was made; in one class, if my memory serves me aright, none at all; hence it would appear that the double standard was not so plentiful as it appeared from the disqualifications. One finds no fault with the National Sweet Pea Society for formulating a rule or specific condition and adhering to it. In view, however, of all the circumstances at the recent show, one might reasonably ask, Why did not the society adhere to its emphatically laid down rule as to the double standard to the bitter end? But it did not do so. For example, in the Sutton Cup Class the defaulters were all promptly disqualified, the result being that some comparatively inferior exhibits, but which conformed to the schedule, obtained prizes. That is quite a usual method of procedure where disqualification has taken place. Now, in Class 8, one of the classification set, and in the Burpee Cup Class, the whole host of competitors were disqualified owing to the presence of double standards, yet the judges immediately appended a card to the class card of the finer exhibits recommending these the prizes—in short, advising the committee to abrogate the rule applying to the double standard. Was it too much to expect that the committee should have sternly refused to follow such advice in the face of conditions so emphatically and prominently set forth, and to have said "No; we will award no prizes at all in these classes"? I suppose so, judging from the fact that the prizes were awarded on merit, and that, after all, the rule counted for naught. The above are good examples of "Guilty, with a strong recommendation to mercy"; but there was no mercy vouchsafed to the solitary exhibitor in the London County Class, who was disqualified outright, yet he had as much right to consideration as the rest, for his was no greater sin. To the minor lights in the Sweet Pea exhibition world it must be a little consoling to know that more than one of the National Sweet Pea Society's committee came to grief over the double standard clause, and of such one might of a surety say, "They have digged a pit, and have fallen into the midst of it themselves."—E. H. JENKINS.

Clematis montana.—The huge and beautiful specimen of the above plant shown in the photograph finds its home at The Gables, View Road, Highgate, N. As may be judged from the picture, it was a magnificent sight. It is the finest show the plant has ever made. Probably the thorough ripening of the wood by last year's brilliant sunshine may account for such a wealth of blossom. It is about thirty feet to thirty-five feet in height.—C. T.

Rose Conrad F. Meyer.—On page 338, issue July 6, "An Essex Reader" has a good word for this Rose. Your correspondent does not over-estimate the good qualities of the variety in question, as it is undoubtedly a very fine one. In a garden in a town on the South Coast I recently saw a very fine specimen trained to the trunk of a large Fir tree. The plant was flowering profusely the last week in June, and gave promise of doing so for many days more. The partial shade cast by the large tree seemed to suit the Rose very well, the flowers being very rich in colour.—AVON.

The Jungle Fungus.—A gentleman recently pointed out to a number of gardeners a border in his garden where he had failed to grow several Chestnut trees. Eventually he had the soil removed to a considerable depth and some distance around, and this revealed a lot of fungus, of which a culture was obtained, and it proved to be the jungle fungus (*Rosenaria necatrix*). The position was at the edge of a wood, and the fungus was traced for a considerable distance. After removing all that could be found, the soil was limed, a hole was again made, left open to the sun for three days, then coated with lime, and a plant put in. So far the specimen is doing well. This case, however, proves that there is a real danger from fungus where choice trees are grown, and that, before they are planted, it is advisable on the part of the cultivator to make sure that the soil is quite free from it.

Wistarias.—The fine illustration of the splendid *Wistaria* which appeared on page 355, issue July 13, reminds me of a collection of these plants at Clandon Park, Guildford, the country seat of the Earl of Onslow. In the centre of a sunk garden on the lawn some very tall, strong posts had been fixed to form an octagon, I believe, with a still taller central post. Chains connected all these posts, and some of the best varieties of *Wistarias* had been planted near each one when I saw these gardens a few years ago. When the whole of the structure is covered with branches and the flowers are fully developed, the effect will be most beautiful, though somewhat formal. The informal growth of the specimen shown in THE GARDEN adds very considerably to its beautiful appearance. It reminds me of a *Honeysuckle*

which I saw in a wood near the New Forest some time ago. The plant almost covered every branch of an Oak tree and depended gracefully from them, and, being well flowered, looked charming. Both Oak and *Honeysuckle* were in good condition. Near by another *Honeysuckle* had covered the trunk of a Pine tree to a height of about sixty feet.—G. G.

FORTHCOMING EVENTS.

July 30.—Royal Horticultural Society's Exhibition at Vincent Square. Lecture at 3 p.m. by Mr. Hooper on "The Pollination of Fruit Blossoms."

THE GREENHOUSE.

MIGNONETTE IN POTS.

HOW TO GROW PLANTS THROUGH THE WINTER.

THIS fragrant flower is greatly appreciated at all times when grown in the open borders, but it is especially liked when grown in flower-pots in the greenhouse or conservatory. Pot plants are usually had in flower during the spring months when blossoms are scarce. To obtain very strong plants, seeds must be sown

in July, and the resultant young plants grown on very steadily during the autumn and winter months. As wireworms are great enemies of *Mignonette*, the cultivator must be sure that the soil is quite free from them. Old fibrous loam is the best; use two parts of such, one part of leaf-soil, and one part of sand, rotted manure and old mortar rubble.

It is very important that the compost be sweet, and on this account I do not believe in sowing the seeds in their flowering pots, because the soil in bulk has to remain in the pots so long, and it often turns sour. Sow the seeds in pots $3\frac{1}{2}$ inches in diameter, dropping four or five seeds half an inch apart on the surface of the soil in each pot. The same kind of compost must be used both at the time of sowing the seeds and at the repotting later on, only when the latter work is done the compost should be in a rougher condition. Cover the seeds with fine soil, and place the pots in a cold frame with the lights well tilted above them. It is better to do this than to allow the plants to get saturated with rain-water occasionally. Gradually thin out the young plants to one in each pot. I have duly noted the condition of plants as grown in pots under similar treatment. Three, two and one *Mignonette* plant were, respectively, grown in pots, and all were very fine indeed, but the single plant made the best "pot." It was a superb specimen, branching out freely, and bearing long and well-formed spikes of blossoms. The point of the plant must be pinched out either when the specimen is quite young, so that the new side shoots may get strong before the dull days of winter come, or the plant must not be pinched before the first week in January. Late autumn stopping results in the growth of weakly side shoots. Place the plants in $6\frac{1}{2}$ -inch pots in September, and remove them to a shelf in a greenhouse or conservatory in October or, at the latest, early in November. When there are plenty of roots in the large pots and the longer days come, feed the plants judiciously. They require plenty of light and air in fine weather. *Machet*, *Victoria*, *Spiral*, *Perfection*, *Bismarck* and *Golden Queen* are all beautiful varieties to grow. B.



THE MOUNTAIN CLEMATIS (C. MONTANA) IN A LONDON GARDEN.

July 31.—Dinas Powis Flower Show. Llanelly Flower Show. Chesterfield Flower Show. Birmingham Carnation Show (two days). Burton-on-Trent Flower Show. Caterham Flower Show.

August 1.—Tannton Deane Flower Show. Merthyr Flower Show. Usk Flower Show. Roydon Flower Show.

August 2.—Perthshire Sweet Pea Show (two days). Huddersfield Horticultural Show (two days).

August 3.—Société Française d'Horticulture de Londres Meeting. Glasgow and West of Scotland Pansy Society's Meeting.

THE KITCHEN GARDEN.

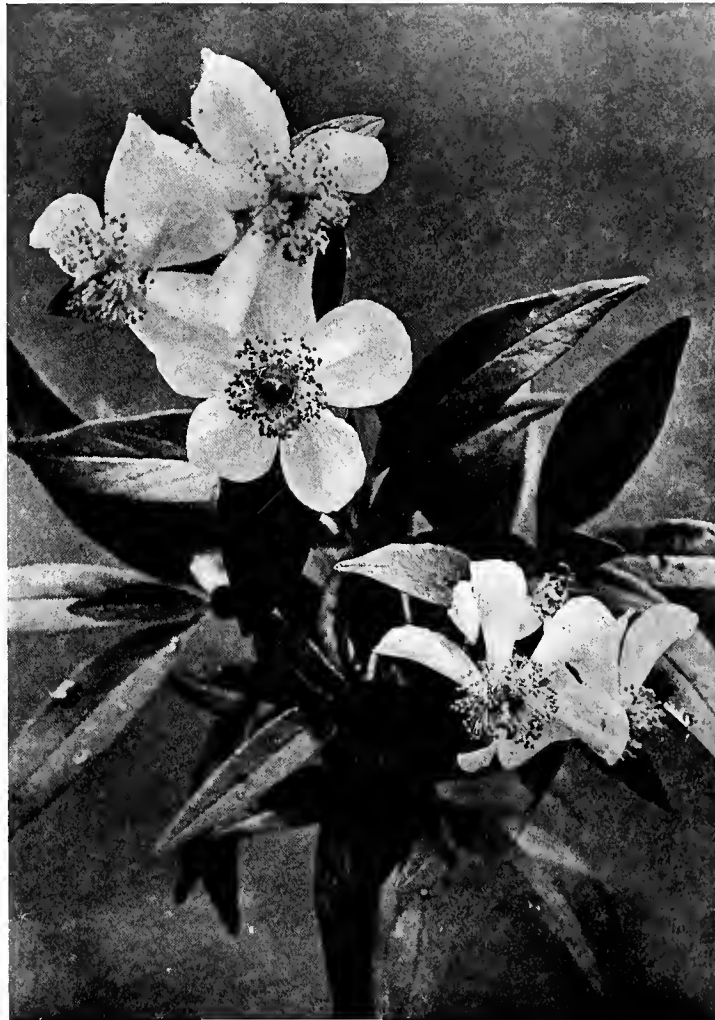
SEASONABLE NOTES ON VEGETABLES.

OUTDOOR TOMATOES.—Half a century ago Tomatoes were scarcely known in our gardens, while now it is the exception rather than the rule to find a place in which they are not represented either indoors or outdoors, and commonly they are in both. The cottager and the amateur regard them as necessaries in the same way as they do Potatoes and Cabbages, though they cannot, of course, and would not if they could, allocate as much space to them. At the present time they are in excellent condition, and are making constant demands upon the time and attention of the grower. Water is required in abundance, and it is almost invariably wise to supplement it with weak liquid manure. The particular kind that is used is not of material importance, provided that a change of diet is arranged and it is never overdone. It is of paramount importance that all shoots springing in the axils of the leaves shall be rubbed out, and that no defoliation shall be done beyond what is absolutely necessary to admit light to the fruit.

Winter Greens.—The planting of Brussels Sprouts, Broccoli, Savoys and Kales must be continued as land falls vacant. With the single exception of Broccoli the plants demand a deep, thoroughly-cultivated soil that is in excellent heart, and no efforts must be spared to meet these requirements. Broccoli, however, that has to stand the winter is preferably planted on a firm base, and the soil should be made solid about the roots to encourage a sturdy, hardy growth. In rich, open ground the plants grow too rapidly, and become so soft that they succumb to the variable weather. A grubbed Strawberry-bed or a site that has carried a crop of autumn Onions is suitable, all weeds being removed, and planting done with a bar. The roots of occasional plants ought to be closely examined in case of an attack of gall weevil; if the knobs are seen, pinch or cut them off and draw the roots through a thick puddle of soot, lime and soil.

Sowing Lettuces.—It is the admirable rule in most gardens to sow Lettuces at frequent intervals, the quantities usually being rather small in preference to sowing big batches at protracted intervals, because splendid quality is thus practically assured. Now we shall soon have to be thinking about autumn and winter produce, and the site selected ought to be prepared ready for sowing immediately the most favourable time comes. A variety of the Hicks' Hardy White type should be chosen in the Cos section, and of the Stanstead Park group in the Cabbage section, as these stand splendidly and the quality from well-grown plants is first class.

Early Potatoes.—These were good and early this season, and most of them are now out of the ground. It is wise to remember that they do not store well; that is to say, they soon lose quality when they are lifted. The rule, then, should be to dig in small quantities for immediate use, as one thus secures the finest flavour. If tubers for seed next season are to be saved at home, only the best must be chosen for the purpose. This does not mean large ones; on the contrary, sets weighing about three ounces are the most serviceable, but they must be perfect in shape, according to the variety, and there must not, of course, be the slightest sign of disease. Varieties



CARPENTERIA CALIFORNICA, A SHRUB FOR A WARM POSITION.

which follow the earliest must be dug in succession, as they will still add considerably to their bulk if the weather is favourable and disease does not appear. Watch closely for it, and apply Bordeaux mixture the instant the first trace is discovered.

Peas and Beans.—To keep the Peas and Beans going now will demand incessant attention, especially on light soils. Watering at the roots and the application of liquid manure now and again are excellent, but the soil for a foot from the plants at least on each side of the rows must be kept open by frequent stirring or hoeing, or, what is better, have a thick mulching of manure. An evening hosing now and again will still prove decidedly beneficial.

H. J.

TREES AND SHRUBS.

A BEAUTIFUL FLOWERING SHRUB.

(CARPENTERIA CALIFORNICA.)

A NATIVE of the Sierra Nevada, California, this evergreen shrub, though hardy in most parts of the country, will be found to thrive and flower more satisfactorily when planted against a sunny south or west wall or some other similar position. The flowers are produced, three or four together, in clusters at the ends of the shoots; they are white and fragrant, about two inches or rather more across, with an attractive cluster of yellow stamens in the centre. The leaves are 3 inches to 4 inches long, broadly lanceolate, glossy green above, much lighter beneath. *Carpenteria californica* belongs to the Natural Order Saxifragaceæ, is figured in the *Botanical Magazine*, t. 6911, and has been in cultivation in this country rather more than thirty years. Fairly free in growth in light, sandy loam, with, for preference, a little peat and leaf-mould added, the subject of this note forms a pleasing evergreen bush of good size.

A. O.

THE INDIAN HORSE CHESTNUT.

(ÆSCULUS INDICA.)

THOUGH first introduced into this country from Northern India more than sixty years ago, *Æsculus indica* has found little favour with planters. This is, presumably, because the tree is not quite so hardy as the majority of the Chestnut family. The behaviour of the tree, however, where it has been planted leads one to the conclusion that there is every hope of success, except in cold and bleak positions. The largest specimens are in Suffolk, two trees at Barton in that county being between sixty feet and seventy feet in height. There are several vigorous young trees at Kew, the tallest, which flowers annually and ripens seeds, being about twenty feet in height. In Northern India *Æsculus indica* is found growing at an elevation of 8,000 feet to 10,000 feet. Perhaps its greatest claim to recognition is the fact that it flowers towards the end of June in a normal season, when the majority of the Horse Chestnuts have finished flowering.

There is a richness about the appearance of the Indian Horse Chestnut—the luxuriant, shining green foliage and the dainty colouring of the flowers—which readily distinguishes it from the other species. The leaflets are five to seven on a leaf, occasionally nine, the largest, generally the middle one, being sometimes a foot in length. The flowers are white, borne in a fairly closely arranged raceme; the two small upper petals are heavily blotched with yellow when opening, changing with age to orange red; the lower petals are tinged with pink.

THE FLOWER GARDEN.

FOXGLOVES FOR WOODLAND AND PLEASURE GROUNDS.

THE Foxglove (*Digitalis purpurea*) is such an easy plant to grow, and a fairly frequent inhabitant of our hedgerows and woods, that too often very little attention is given to it in gardens. By years of careful selection we now possess a strain of Foxgloves in every way—colour, size of flower and height—vastly superior to the wild plant. The white flowers, often prettily spotted, form a pleasing contrast to the varying shades of pink, rose and rosy red. A pleasing advance of recent years is the yellow Foxglove, obtained by crossing *Digitalis purpurea alba* with presumably *D. ambigua*. The flowers may be described as buff or rich cream. One of the best strains of the yellow Foxglove is that catalogued by Messrs. Sutton as Giant Primrose. The careful selection and harvesting of seeds is so thoroughly done by seedsmen that even seeds of Foxgloves are offered in separate colours, a very large percentage of which come true.

The would-be grower can, if he wishes, purchase, instead of a packet of mixed seeds, white, rose or spotted varieties separately. A curious break or freak is that variously known as *monstrosa* or *gloxinaeflora*. In this plant, instead of the spike of flowers all being semi-pendent, the top or terminal one is upright in shape, like an inverted bell, and several times larger than the usual Foxglove flowers.

While there are very few places in a garden where the Foxglove will not grow in shade or sun, there are certain places in the pleasure grounds and woodland for which it is admirably adapted. The naturalising of Foxgloves in moist, open breaks in the woodland, made by cutting down trees or clearing away shrubs, is now undertaken in many places. A few plants thrusting up their heads in the shrubby borders, where space permits, between the shrubs, or a large group in the pleasure grounds, as is well shown in the illustration, deserves consideration. And what of the Foxglove for the small garden! It is one of the best plants for the shady north border, where so few plants are satisfactory, and it is often seen to advantage in odd corners, where the seeds may fall and come up with no attention among hardy Ferns.

There is very little more to be said about the cultivation of the Foxglove. To flower the following season the seeds should be sown from March to May; but when allowed to fall and come up unaided, the seeds are not ripe until July or August. Falling at this time the plants are not large enough to flower the following year; self-sown seeds thus are generally approaching two years old before flowering. Though spoken of as a biennial, the flowering Foxgloves often develop another growth from the base, which blossoms the succeeding year. As will be seen from the accompanying illustration, it is a free-flowering plant when properly treated.

A. O.

SWEET PEA TRIALS AT SUTTON GREEN.

FAVOURED with perfect weather, the National Sweet Pea Society held its outing to the Sutton Green (Guildford) trials on Thursday, July 11. The party was a representative one, and included two growers from California, who, conscious of their own failure with the Sweet Pea seed crop this year, viewed the very promising rows of Sweet Peas at Guildford with a certain amount of envy. It was generally agreed that the Sweet Peas had never before looked so well at Sutton Green, and Mr. Harry Foster, the trial superintendent, is to be complimented upon the success of this year's trials.

The all-pervading Sweet Pea disease, however, has made its presence felt, and this was particularly noticeable among the cream-coloured varieties.

New Varieties.—There is no new variety of outstanding merit, and no first-class certificates

in fours, sent by Mr. R. Bolton; and Bertram Deal, deep lavender, with a strong inclination to throw double standards, sent by Mr. William Deal. With such a multiplicity of varieties as seen at the trials, it is difficult to keep pace with them, and while there were many good novelties at Sutton Green, the following were, in our opinion, remarkably good: Constance Hinton, the largest white, but just spoilt by a pink tint in some flowers; Corene, a true variety of salmon shade; Stirling Stent, a fine salmon variety which improves with age, the flowers being remarkably fine, even without shading; Thomas Stevenson, a first-rate orange scarlet variety, good from all sources from which it was sent for trial; Red Star, a grand scarlet; Royal Scarlet, also good, but not quite fixed; Scarlet Emperor, which in our opinion is the best of all the scarlets; Edith Taylor, salmon rose, one of the best of Mr. Holmes' raising; and Spencer Blue, synonymous with Southcote



FOXGLOVES CLUSTERED IN A WOODLAND GLADE.

have been awarded this year. Nevertheless, there are a few novelties worthy of special mention, and these, no doubt, will become favourites when better known. Honours had been awarded to new varieties a day or so previous to the outing, and no fault was found with the awards made. Two varieties given awards of merit are held in reserve for the silver medal. They are R. F. Felton, a lovely mauve, and Lady Miller, a beautiful salmon, with a faint tint of bronze in the standard. It is a variety of great promise for table decoration, and will also be telling in the hands of the exhibitor. Both of the varieties are apparently true, and both are sent by that successful raiser, Mr. A. Malcolm. Other varieties to obtain awards of merit are King White, a very handsome white variety, from Messrs. A. Dickson and Sons; Decorator, a very fine variety sent from three different growers, one of whom describes it as rose pink, another as crushed strawberry, while the cautious third has not ventured upon a description at all; Agricola, soft lavender with a faint flush of pink, and producing its flowers

Blue, quite true and of lovely colour. The outing to the society's northern trials at the Burbage Experimental Station, near Hinckley, took place on the day following. A duplication of the Sutton Green trials is held at Burbage, where Major C. C. Hurst, F.L.S., is the trial superintendent. The awards to new varieties are based upon the results of both trials.

SWEET PEA JOTTINGS.

Growing Under Glass.—One of the minor things that struck me at the International Show was the marked difference between the same variety when grown under glass and when out in the open. There were a couple of sorts for comparison on Messrs. E. W. King and Co.'s stand. I do not think I ever quite realised as I did then what a contrast there is between the results of the two, and how a covering of glass somehow puts a touch of beauty and refinement in the colouring that is wanting without it. It is to the Sweet Pea as the

glove is to the lady's hand. [Query—Ed.] Since I came home it so happens I have seen the same thing in my own garden. My pot plants are much later than usual this year, as I did not sow until the very end of February, and some of them have hung on flowering until I had the same varieties out of doors. It was miserable, damp weather all the ten days when they were first opening, and they had the greenish edge and pinched look about the standards, so that the comparison was still more in favour of those under the glass roof. My practical suggestion is that it is well worth while anyone who has the necessary head-room of 7 feet or 8 feet in a cool, and afterwards, when May comes in, in a cold, greenhouse having a dozen pots of Sweet Peas to just forestall the open-air ones. There is a minimum of trouble while growing, and the lengthening of the season and the exquisite delicacy of the blooms well repay what little there is.

Scent.—I shake my head sadly over some of the defects of the much-vaunted monstrosities that nowadays do duty for flowers. I remember when I was in Mogador, many years ago, my Jewish interpreter telling me that his young fellow country-men when they were choosing a girl for a wife always liked "plenty of her," and that a slim, refined-looking one had nothing like such a good chance. Such was their taste. Is it not the same with Sweet Pea lovers in the present year of King George V.? They like "plenty of her" in the flower they affect, and that is all. Such a thing as scent is hardly taken any notice of in the awards of to-day. What have our noses done to merit such treatment? They never have all the opportunities of enjoyment that their friends "the eyes" have. Is it not a bit hard to take some of that little away? I pleased my old nose hugely this year. It has since told me it was the greatest Sweet Pea treat it had had for ages, and it has put it down as one of its yearly requirements. This is the "memo.": Buy a packet or two of Mother-o'-Pearl—*extra* sweet-scented, an old-fashioned silvery grey flower; the sweetest Sweet Pea.

The Doctor's Sweet Peas.—I saw Dr. Phillips' Sweet Peas about a fortnight ago. They all looked the picture of robust health, and I felt sure he would have a good season. Since then I see they have done well at Hanley and in London. But what I really wanted to say was that I was especially charmed with Queen of Norway, Rose Diamond and Doris Usher. They are three lovely shades for house decoration. A word, too, for our well-tried friend Clara Curtis. As grown at Malpas it was grand. It is very beautiful in vases with some nice, fresh green foliage of its own. I say to myself, Suppose that it was the buttercup yellow

we are expecting, would it be as pleasing? Would it be as uncommon? We have so many strong yellow flowers and comparatively few pale primrose. But, then, everyone of us is a fearful novelty-hunter at heart.

JOSEPH JACOB.

[We fully endorse Mr. Jacob's remarks about the desirability of retaining the fragrance and refinement of Sweet Peas. A Sweet Pea without fragrance is not worthy of the name, and we hope the National Sweet Pea Society will not encourage such flowers.—Ed.]

SEASONABLE NOTES ON AURICULAS.

Alpine Varieties.—Several weeks ago I ventured to give the names of a few alpine Auriculas which

Teviotdale, Ullswater and Mildred Jay are all excellent. Admiration is very pretty, if good, but the centre is sometimes weak, and I do not like it so well as I did in former years. Dazzle is wonderfully bright in colour, but has a nasty trick of burning in the body colour just outside the centre. There are more yellow-centred sorts than white and cream, but the prettiest, to my mind, are Claude Halers, Duke of York, Dean Hole (small, but very bright), Ettrick, Firefly, Flora McIvor, Marie Corelli (late in flowering, handsome), Mrs. Markham, Perfection, Rosy Morn, The Bride and Uranie." I am delighted to commend this excellent selection, many of which I have, and can therefore personally commend. If other readers will favour with their pet selections, I shall be pleased to embody them in this column from time to time as opportunity permits; but my notes have to be written some time in advance of publication, so those sending must not be disappointed if they do not see their lists in the issue of THE GARDEN published the same week as they have posted their letter.

Sun and Shade.—Auriculas have a decided partiality for sun just as they have for shade. Their special preference is for sun in the morning and evening, and shade during the hottest part of the day. It is therefore necessary so to arrange the frame or the house devoted to them that these requirements are met, as it means so much to the maintained excellence of health and satisfactory progress. It is essential, too, that the atmosphere of the structure shall be kept sweet and cool by ample ventilation; stagnation will lead to trouble and worry with these plants quicker than almost anything else, as far as my experience teaches me. With a view to encouraging admirable growth, the soil must be moist; to make it sodden will lead to the rotting of many of the most valuable roots, while to allow it to become as dry as dust will mean that roots will shrivel up. The happy medium is the thing for which to strive.

Show Varieties in Borders.—Although the show Auriculas are equally as hardy as the alpine varieties, they are not usually grown in the open garden, because the exquisite colours are so extremely liable to be marred by the weather, much more so, in fact, than the alpine flowers. I should not grow the choicest varieties of either section out of doors all the year round, as many would almost certainly perish in the winter months. Those who have plants upon which they set real store, and which they are therefore anxious to keep for flowering next season, will be well advised to lift and pot them. The operation will not demand much trouble, and the time will wholly depend upon the number to be handled. Precisely as in ordinary



RODGERSIA PINNATA, A HANDSOME PLANT FOR ROCK GARDEN OR BORDER.

(See page 379.)

were favourites of mine and grew well with me, but the selection was not sufficiently modern to please one or two of my readers. Now, Mr. J. L. Gibson most kindly sends me an up-to-date list, and this I gladly give here, thanking him on my own behalf, as well as on that of the many readers of THE GARDEN, for the trouble and care that he has taken in the matter. Mr. Gibson says: "I am very pleased to send a list of alpine Auriculas as requested. The varieties are not selected because of their exhibition virtues, but for their beauty, size of pip and truss, and generally for the great pleasure they will give their cultivators. Among white and cream centred varieties, Bluebell, Argus, Janet, Miss Berkeley, Mrs. Douglas, Phyllis Douglas,

repotting, pots that are deep in proportion to their diameter ought to be given the preference, and the soil may advantageously be practically all sound fibrous loam. If the clumps are large, they must be divided according to judgment or necessity. When the work is finished, put them in the greenhouse or frame, and see that the utmost care is exercised in watering, especially during the first two or three weeks—until, in fact, they have become perfectly accustomed to the changed conditions. F. R.

THE ROCK AND WATER GARDEN.

A BOLD PLANT FOR THE ROCK GARDEN.

(RODGERSIA PINNATA.)

UNTIL within recent years *Rodgersia* was regarded as a monotypic genus, and, indeed, but one species, *R. podophylla*, was seen or known in cultivation. Now, however, thanks mainly, if not entirely, to the unceasing enterprise of Messrs. James Veitch and Sons, several new and important species and varieties have been added, each and all alike valuable to the garden, where, whether in flower or in the fulness of their leaf beauty, they are without a rival.

Regarded generally, the species are reputedly of a moisture-loving nature, though there are exceptions, and certainly the finest solitary example known to the writer was a specimen clump, about six feet across, in an open border in the sun-kissed garden of the late Rev. H. Ewbank at Ryde many years ago. Not only did the plant grow and thrive in ordinary loamy soil, but also put on late in the summer the fine rich leaf colouring that rendered a plant of such distinction a feature in the garden. At other times one or other of the more recently-introduced kinds are seen in grand condition in full sun where a never-failing water supply is within reach of the root-fibres. For preference, however, I should prefer a generous mixture of loam, peat and leaf-soil in about equal parts, with an addition of one-fifth well-decayed manure, plenty of root moisture and a sunny position, as well as one sheltered from north and east.

The plant in the body of the picture is the more recently-introduced *R. pinnata*, whose flowers are of salmony pink tone, and of which no description is required in the circumstances. There is also a pure white variety of this plant, which is highly desirable.

R. æsculifolia has large, erect panicles of pinky white, fragrant flowers, and handsome bronzy green leaves after the style of the Horse Chestnut; hence the specific name. Another remarkable species is *R. tabuliformis*; this is characterised by large peltate leaves and inflorescences of creamy white flowers. All are natives of Japan or Western China, and perfectly hardy in this country. E. H. JENKINS.

THE ROSE GARDEN.

ROSES WITH BAD HABITS.

PERHAPS it is natural for raisers when sending out a new Rose to extol all its good points and to be very blind to its faults. Shakespeare says if we all had our deserts, who would escape a whipping? and perhaps some fault could be found in every Rose grown. Now, I do not propose to make this a complete list, because I would invite the views to be given by some of the readers of THE GARDEN. Neither do I propose to specially condemn a Rose because it is scentless, although in the opinion of many, myself included, this is a very bad fault or defect which should make one hesitate before they plant it. I think I cannot do better than commence with a Rose that usually takes the highest position as a show bloom, and that is

Bessie Brown. I am constantly hearing complaints against this Rose, and it is generally that

Avoca, beautiful at times, but woefully thin, and it has also a tendency to turn blue. In like manner

His Majesty is very much over-praised. Now and then one obtains a fine flower, but in an amateur's garden it would be a very poor thing, and not a patch upon some of the good old Hybrid Perpetuals like *Comte de Rainbaud*.

Konigin Carola is perhaps one of the best of pink Roses, its blooms being of huge size and the petals very handsome, but the split centre of nearly every bloom spoils it very much indeed, so much so that one can rarely obtain a bloom for show.

J. B. Clark.—One great fault of this Rose is that it grows so strongly, and one is troubled to know what to do with it. The best method of culture is to treat it as a free bush; but how can the small amateur do this? I would suggest planting it against a fence or use it as a pillar Rose. Then

Killarney, what a beauty she is, but how sadly prone to mildew, so much so that the plants are



A BEAUTIFUL BED OF ROSE JOSEPH LOWE.

it fails to open well and its head hangs down as if the Rose were ashamed of its own loveliness. I know exhibitors do not object to this fault, because they maintain that it helps to keep the bloom clean; but give me a Rose that is held holdly upward, displaying its beauty to all who pass by.

Souvenir de Pierre Notting and **Mme. Constant Soupert** are two lovely gems; but who can recommend them to the novice, for scarcely a bloom is produced devoid of a blemish generally upon the outer petals? In my opinion it spoils the beauty of these two Roses so much that I cannot recommend them to anyone, except to those who exhibit.

Betty is, to me, exceedingly uninteresting apart from the bud, except perhaps in a very cool season or in autumn. Now, if this Rose had the power to hold its open blooms as do *G. Nabonnand* and *Peace*, it would be a fine thing. But the flowers are far too thin and fleeting for the amateur whose space is limited. Then there is

often a sheet of white. Of course, this can be checked by the use of *Cyllin Soft Soap*, if applied in good time; but one could wish it were mildew-proof like *A. R. Goodwin*. P.

(To be continued.)

ROSE JOSEPH LOWE.

THIS exquisite Rose combines in its bloom all the good points of *Mrs. W. J. Grant* as far as size and shapely petal are concerned, and also the lovely colouring of *Mme. Abel Chatenay*. It is, in fact, one of our best bedding pink Roses; its freedom of blooming, erect growth and the beautiful form of the flowers are perhaps unequalled by any other pink variety grown.

Being a sport of *Mrs. W. J. Grant*, we cannot look for great vigour, for we all know how the latter fails us at times; but given a good depth of soil and hard pruning, *Joseph Lowe* should be a success in most gardens. I would caution the grower to earth up the plants in

winter, for it is not one of our hardest kinds, although by taking this precaution one need not fear any ordinary winter. P.

LAYERING MOSS ROSES.

Moss ROSES are very charming in the garden; even isolated plants look well and prove attractive; but the best effect is produced when whole beds are devoted to these plants. The varieties may be mixed, but beds of distinct colours are the best. For every purpose Moss Roses are favourites, and few can excel them as button-hole flowers. The plants must be close pruned and well fed. As a general rule, they do not receive this treatment, very little pruning being done and but little manure given. When hard pruned some strong basal shoots grow, and these are good for layering; few real sucker shoots grow. Shoots layered now should be allowed to remain covered until next autumn twelve months, as it is rarely that the shoots root sufficiently to be removed the following winter. Some good loam, a small quantity of sweet leaf-soil, and plenty of coarse sand or road grit form a nice layering compost. More fibrous roots, however, will grow if some small pebbles are mixed with the compost at the rate of one peck to two bushels. The shoots must be held securely in position by strong wire pegs, and during the summer-time the compost must be kept in a consistent state of moisture. Amateurs who wish to form a collection of Moss Roses should plant the following six varieties first, namely, Baron de Wasenær (light crimson), Blanche Moreau (pure white), Old Pink (pale rose, full and well mossed), Celina (deep crimson), Zenobia (satin rose, full, well mossed) and Deuil de Paul Fontaine (crimson, well mossed, a very strong grower, looks well on a low trellis).



PAVED ROSE GARDEN AT ISLAND, STEEP, PETERSFIELD.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Nephrolepis exaltata muscosa.—An American sport from *N. e. superbissima*, whose chief characteristics are firmness, dwarfness and great density. The plant is dwarf and compact, the fronds being very thickly set. It is quite distinct even among the many that have preceded it. From Messrs. H. B. May and Sons, Edmonton.

Plagianthus Lyallii.—This white-flowered New Zealand shrub has been doing uncommonly well this year. It is a plant of great beauty when the drooping flowers on slender pedicels are seen in such abundance as presented. Exhibited by Messrs. Robert Veitch and Sons, Exeter.

Cattleya Warscewiczii alba Firmin Lambeau.—We had no opportunity of seeing this remarkable plant, which was early removed from the hall, but the fact that, in addition to a first-class certificate, the committee recommended that it be awarded a gold medal is the best proof of its unique character and excellence. It was exhibited by M. Lambeau, Brussels.

AWARDS OF MERIT.

Odontoglossum Epicaste (O. Clytie × O. crispum).—The flowers are of a blackish maroon, distinctly bordered with purplish mauve. It is very distinct.

Zygopetalum Brewii (Z. Perrenoudii × Z. rostratum).—Sepals and petals greenish, lip blotched reddish purple and broadly margined with white. These were exhibited by Messrs. Charlesworth and Co., Hayward's Heath.

Patrinia palmata.—Quite a remarkable and interesting novelty from Japan. The plant is about

profusely in a terminal head. It is a highly-attractive subject of distinctive colouring, and merits general cultivation. A splendid basket of plants a foot high was exhibited by Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Dorking.

Astilbe Rhenania.—The flowers of this variety are of rosy pink colouring, with a strong suspicion of electric blue at the tips of the sepals. From Mr. Profittlich, Twickenham.

Nymphæa formosa.—A fine Marliac hybrid Water Lily, with handsome flowers coloured pale rose with deep yellow centres.

Nymphæa Attraction.—Another Marliac hybrid of handsome proportions. The flowers are coloured deep red, shading to rose towards the edges. This fine pair of Water Lilies came from Mr. J. Hudson, gardener to Mr. Leopold de Rothschild, Gunnersbury.

Gladiolus primulinus hybrids, to be known as the "Lang-Prim" hybrids, and which embrace shades of rose, salmon and yellow. Award of merit for the strain. From Messrs. J. Kelway and Son, Langport.

NEW FRUIT.

Peach Royal Charlotte.—An award of merit and cultural commendation were given this variety, of which the kernels were the only evidence remaining. From Sir Trevor Lawrence, Bart., Dorking (gardener, Mr. W. Bain).

All the foregoing were shown before the Royal Horticultural Society on the 16th inst., when the awards were made.

NOTES ON GARDEN DESIGN.

Not the least notable feature in the re-birth of interest in garden affairs during the last twenty years is the attention given to right design as well as to cultural success. The formal garden has come into its own again after long languishing in contempt. While the broad principles which govern its lay-out are generally accepted, extravagance has sometimes been shown in their application. It is therefore proposed to illustrate frequently in THE GARDEN such features as steps, paved parterres, pools, pergolas, &c., which are of unquestioned merit. The accompanying photograph shows the paved Rose garden at Island, Steep, Petersfield, designed by Messrs. Unsworth and Inigo Triggs. The latter is well known for his fine books on garden design, and we are entitled, therefore, to expect interesting work from him. The paved walks are so contrived that every Rose can be reached dry-shod without crossing grass. In the middle is a small, round pool, which serves to focus the design. The paving is laid "crazy fashion," and accords pleasantly with the dry-stone retaining walls which surround the sunk portion of the garden.

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L. W.

GARDENING FOR BEGINNERS.

THE LAYERING AND PLANTING OF STRAWBERRIES.

THE cultivator of the Strawberry reaps a quick return for his labour. Few kinds of fruit entail less labour than does the Strawberry, but good work must be done at planting-time, and strong plants put in if the best crops of fruit are to be realised.

Layering.—Although a strong plant yields many runners suitable for layering, it is not advisable to layer more than one on each runner, and that should be the one nearest the parent plant, all others being discarded. From three to six plants may be raised from each parent plant. The necessary runners must be layered as early as possible, so that the young plants can be put out in their permanent quarters and get well established before the winter months come. Plants so treated will bear a good crop of fruit the following year, and much earlier than those planted late in the season. The runners may be layered in small pots or in squares of turves. Fig. 1 shows an old plant in a pot which has produced two runners, one of which is shown layered in a small pot. Old plants in beds produce layers in this way. The compost must be good. Fibrous loam, two parts; leaf-soil, one part; rotted manure, passed through a 1-inch-meshed sieve, one part; with a small quantity



1.—OLD PLANT IN POT WITH RUNNERS.



2.—LAYER ROOTED READY FOR PLANTING.

of sand added, will form a suitable compost. Peg down or place a stone on each runner in the pots. The runners on border plants must be layered in a similar way. Fig. 2 shows a strong-rooted layer ready for planting.

The Position for the New Bed.—This must be an open one for the main crop, away from tall trees or buildings. For very early cropping a few rows of plants may be put out on a sheltered border facing the south.

Preparing the Ground.—In every instance where young plants are to be put out it is essential that they be planted in deeply-dug ground. At this season the soil may be deeply trenched, and made moderately firm again by treading in the short space of two days, because the soil is not too moist. A naturally poor soil must be enriched by the addition of some well-rotted manure, and this should be supplemented by top-dressings of manure after the planting is done. Trench the soil two spits deep—twice the depth of the spade—and, in addition, fork up the subsoil, but leave it below. All fairly large lumps of soil must be broken up, and

for this purpose a garden fork will be found very useful. A rich soil need not be manured when dug; the top-dressings will be sufficient.

Planting.—Early planting is advisable, and so no time should be lost in getting the rooted layers put out in their fruiting quarters; but it is a good plan to first place the young plants in the pots on the north side of a wall or fence for three days when severed from the parent plants. If given such shelter and syringed twice daily they will receive no check to growth. A Strawberry plant is at its best the second year after planting. Renewal is generally advisable at the end of three years. In many cases valuable space is wasted owing to the young plants being put out too far apart. The strong-growing varieties should be planted 2 feet apart each way; the varieties with smaller leaves and a less robust habit will do well at a distance of 20 inches each way. One hour prior to planting thoroughly water the young plants in the pots. Fig. 3 shows on the left a plant with cramped roots. This is a bad way to plant. On the right a plant with the roots spread out is depicted, and the

arrow indicates the right depth to plant. This is the correct way. In planting, a hand-trowel should be used. The hole must be made large enough to contain the roots without cramping; the crown of the plant must be above the soil-level, and the soil should be firmly pressed round the roots with the hands. The greatest care should be taken to prevent soil getting into the hearts of the young plants; if it does, growth is severely checked and the plant may be killed outright. Give water and mulch the surface with very short, well-decayed manure, if obtainable.

G. G.



3.—ON THE LEFT, PLANT WITH CRAMPED ROOTS—BAD WAY TO PLANT. ON THE RIGHT, ROOTS SPREAD OUT. ARROW INDICATES DEPTH TO PLANT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

The Summer Bedding.—The generally dull, damp weather we experienced greatly helped the various subjects after planting. At the time of writing we are having a spell of warm weather, and copious supplies of water overhead with a rosed can should be given the beds in the evening. Keep the various subjects tied up as growth is made, and the Dutch hoe going where space permits, as this is beneficial to growth, and also adds to the attractiveness. Faded flowers should also be removed weekly.

Violets.—These, too, have made good growth, and now should be frequently Dutch-hoed; also cut off any runners from the plants. A dusting of soot over the ground on showery mornings will prove helpful, as will some patent fertiliser. Damp the plants over well on warm evenings; this will help growth and also preserve it from attacks of red spider.

The Rose Garden.—Keep the plants in the beds as attractive as possible by removing the faded blooms, aerating the surface soil and keeping the ground free from weeds. Plenty of water at the roots in dry weather and syringings overhead will keep the foliage clean and do much to ward off attacks of mildew. Should the latter enemy prove troublesome, the foliage should either be syringed with a good specific or the foliage dusted with flowers of sulphur, using that known as black, as it is not nearly so conspicuous.

Climbing Roses.—The climbers, as they pass out of flower, may be given a thorough syringing with a good insecticide after having lessened some of the growths. There is nothing gained by allowing them to become crowded and tied in one on top of the other, so thin out liberally the oldest wood, leaving, of course, sufficient young wood to cover and thoroughly mature.

The Hardy Fruit Garden.

Raspberries.—After the fruits are cleared from the bushes, remove the nets and cut out from the base the old fruiting canes to admit light and air to the young growths. Keep the ground free from weeds around them, and loosen with the hoe.

Strawberries.—The beds when cleared of the fruits and no further runners are required should be overhauled, the runners cut off, and any damaged leaves and rubbish cleared away.

Peaches and Nectarines out of doors, in order to keep the foliage in a healthy condition, must be well syringed, and heavy waterings given at the roots. The foliage should be kept tied in as neatly and straightly as possible to the old wood. When the fruits have finished stoning, the crop, if too thick, must be thinned out to the requisite number and exposed to the light and air, and the use of insecticide washes abandoned, otherwise the fruits will become stained and unfit for dessert.

The Kitchen Garden.

Runner Beans.—Every encouragement should be afforded these to crop freely, and if the weather is dry, heavily water and see that the ground is protected with a heavy mulch. The growths may be regulated and weakly shoots thinned out if too thick, and the plants will enjoy a syringing after hot days. When picking, select those that are ready as near as possible. If required for exhibition, the clusters of young Beans should be judiciously thinned and marked accordingly.

Dwarf Beans.—Where one has the convenience of a cold frame or two, a sowing of the above made now will, with a little care and attention, provide a dish or two when the Runners and those out of doors are past. Draw wide drills about a yard apart and sow a double row thinly, as there is nothing gained by overcrowding, and the plants may be thinned again. Frames that have done for Potatoes will need but little extra attention, except the addition of a little Mushroom-bed manure. Keep well damped, admit abundance of air, and as soon as germinated keep a sharp look-out for slugs. Dust with soot occasionally.

Plants Under Glass.

Stocks.—One or two sowings made now will produce good flowering plants for the embellishment of the greenhouse next spring. The plants from the time they germinate must never be

coddled, but be grown on quite coolly to make sturdy plants. Sow the seed in a box or pan, or a pinch of seed can be sown in the centre of a 3-inch pot, and the seedlings thinned to the best plant. The young plants should be stood on a cool ash bottom and out of bright sunshine, and be carefully watered and kept syringed. The second sowing may be made towards the end of next month.

Mimosa pudica.—The Sensitive Plant is one of the most interesting plants for the greenhouse, easily raised from seed, and nice plants may be had in 5-inch pots. Until the plants get sufficiently large they may be accommodated in a cold frame. Water carefully until the roots are active, when waterings once a week or so with diluted liquid manure will greatly assist them.

Eucalyptus globulus.—This is a fine plant for room and decorative work generally. Plants the pots of which are full of root must be fed liberally. Clay's Fertilizer is an excellent manure for such subjects, applied alternately with liquid manure. Pot on the young plants that were raised this season as becomes necessary.

Cucumbers.—At this season these require constant attention to the regulating and thinning of the growth, otherwise it will soon get congested. Apply top-dressings to the bed frequently, and water copiously, using stimulants freely. The growths must be kept stopped at two joints beyond the fruits. Keep the foliage thoroughly well syringed, and if spider is in evidence, syringe late in the evening. Sow for another crop.

Tomatoes.—These are bearing profusely, and will need abundance of water and feeding. When the plants have reached their limit, stop the leading growth, and, if necessary, thin the foliage judiciously. Another sowing may now be made for supplies at a later date.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Carnations.—By all means endeavour to finish layering within the current week.

Dahlias.—Slips from near the collar of the plants will strike root if placed where the cuttings are kept from flagging. Much attention will be needed to keep strong-growing plants securely tied, and to thin the growths so that they do not become overcrowded a few weeks later. By timely attention very much unnecessary labour afterwards is saved.

Starworts.—Any of the tall-growing midseason sorts that are growing too tall may be safely stopped. They will bloom slightly later, but the plants will give a denser mass of colour. It is, of course, essential to discriminate, those of the Nova-Engliæ section being best left to Nature, and Climax also, on account of its late flowering in the North.

Rose-beds.—The practice of planting an undergrowth among Roses sometimes leads to ridiculous results through the carpeting plants overtopping the Roses. This should not be, and, before it is evident, cutting back, thinning, or pinching should be pursued to preserve the Roses in the superior position. I have seen Lavender very effectively used; but the same colour may be had by using *Nepeta Mussinii*, and so with other flowers.

The Rock Garden.

Cyclamen.—The early-flowered species has now matured seeds, which may be sown at once in pots or boxes, to be placed in a cold frame. The seeds sometimes germinate freely round the mother plants, but better results are obtained if they are sown as above.

Double Sweet William.—The dwarf hybrid, presently a sheet of crimson, sometimes dies off quite unexpectedly. Where this occurs it is worth while to relieve portions of the clumps of their flowers, scattering among them some light compost, and watering it in if the weather continues dry. From these portions splendid self-rooted cuttings are to be had in September.

Orchis foliosa.—This has been very fine in a shaded moist corner, and, now that it is going off, the spikes should be removed lest seed should form and the plants be weakened for another year.

Arenaria balearica.—Nothing can be prettier than star-gemmed masses of this lowly alpine, but

it becomes a nuisance when it is permitted to overrun every bit of stone within its reach. This is a suitable time to reduce it to proper proportions now that it has done flowering, pieces being pulled away here and there, and not by any means trimmed. It is a most useful plant to cover otherwise impossible portions of walls.

The Vegetable Garden.

Onions.—Sow seed at once for plants to stand over the winter, either for transplanting or to draw young.

Scotch Kale.—Plant out immediately the young plants are large enough. To do them well, allow at least 2 feet each way. If set in fertile soil they are better if not manured, and, once started into growth, the ground, if loose, should be firmed by foot trampling. These means are effective in reducing losses during extreme frosts.

Herbs.—A sharp eye must be kept on any that are getting at the stage for gathering to dry. Thyme stands the winter all the better when the flowering stems are removed, and a new growth made and hardened before winter sets in. Late pickings of Sorrel may be had if the old leaves and stems are removed and the beds dressed with a compost rich in manure, such as that from Mushroom-beds.

The Fruit Garden.

Strawberries.—All but the latest will now be past, though in many gardens all kinds have been very scarce. Now the beds should be thoroughly cleaned, rooted runners required for planting being first lifted. The ground should be made firm after digging.

Worn-out Beds.—These should be destroyed at once. My plan is to cut over the plants by means of a sharp spade, with which the workman rapidly runs along the rows at the ground-level. The plants, after lying a few days to dry, are gathered into heaps and reduced there and then to ashes, and when time permits the ground is cultivated either by deep digging or trenching, the latter the preferable way.

Rooted Runners.—These usually are arranged close in rows to await ground becoming vacant and prepared for their reception. A thin coating of old Mushroom-bed manure is spread on the ground first of all, and is mixed with the soil in planting, which need not be more than 4 inches in depth. In the course of a few weeks each plant makes for itself a nice ball of fibrous roots.

Ripening Fruits.—The earliest fruits of Rivers' Prolific Plum usually ripen enough now to be used for cooking. This year Plums are so scarce that it may be wise to keep even these for preserving. Occasionally, too, fruits of Peach Early Beatrice ripen thus early on a south wall. It is therefore necessary to examine this and Hale's Early from time to time.

The Plant-Houses.

Primula obconica.—The latest batch of this useful plant should now be placed in 6-inch pots, using extra drainage and not potting over-firm. Return the plants to a cold frame and ventilate only in the daytime, damping the frames in the afternoon and shutting them up every night. They will under these conditions be nice flowering plants by October or November.

Coleus thyrsoides.—These, too, should get a final shift, and may be flowered in 5-inch to 8-inch pots. Keep them growing freely in a stove with light and ventilation, and pinch the tips of the shoots in order to make the plants bushy.

Hippeastrums.—Any plants that have stopped growing must be sparingly watered and given cooler quarters, so that they may go slowly to rest. Offsets growing in cutting-boxes will continue growing for some time yet, and must not be deprived of water at the root.

Cœlogyne cristata.—This useful Orchid is now growing rapidly, and if the plants have not been repotted recently, very diluted manure-water will be beneficial now that roots are being freely produced. A temperature of 60° to 65° suits them well, with free ventilation in fine weather.

Chrysanthemums.—A constant look-out must be kept for the first appearance of aphid, and the points of the shoots at once dusted with Tobacco powder. Tie the shoots well out so as to allow the air to pass freely among them, and as soon as the nights become cool watch for mildew, dusting the leaves with flowers of sulphur wherever it appears.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

**ANSWERS
TO CORRESPONDENTS.**

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEAS (No Name).—To secure the most bloom from your Sweet Peas, let them grow freely, water them according to necessity, feed them generously, and pick every flower-stem immediately, or just before, it reaches perfection. This will spell quantity, but one would not care to promise that the quality will be superlative.

VIOLA DISEASE (Reader).—The Viola foliage is attacked by the rust fungus (*Puccinia violae*). It is difficult to deal with, for it spreads very frequently from wild Violets to garden forms; but all attacked parts of plants are best destroyed. It is not, however, usually a very serious pest. Perhaps spraying with a rose red solution of potassium permanganate would do good. The leaf-curl of the Roses is the work of the Rose sawfly, which lays its eggs in the leaf, causing it to curl. Probably spraying it with lead arsenate (which is best purchased in the paste form) would be a means of destroying the larvæ if the spray were applied, say, at the end of May, before the leaves curled. The best means would be to remove the top 2 inches or 3 inches of soil from under the bushes some time during the winter, and either burn it or bury it deeply. The pupæ are present in this, and this would be a means of getting rid of them. The black spot on the Roses is due to the fungus *Actinonema roseæ*, and spraying with liver of sulphur, or with Bordeaux mixture, commencing immediately, is, next to hand picking, the best means of checking its spread.

THE GREENHOUSE.

CYCLAMEN (M. T. V.).—The leaves of Cyclamen have been very badly attacked by that insidious insect of microscopic proportions to which the name of Begonia mite is usually applied, from the fact that it was first noted on these plants. The greater part of the mischief is done while the leaves are in a young state, though the damage is more apparent afterwards. It can be destroyed by dipping in one of the several preparations of nicotine now to be obtained, following closely the instructions supplied with it, as these preparations vary in strength. Vaporising with XL All Vaporiser will also keep this mite in check. The ravages of this mite are greatly on the increase, and it now attacks a number of indoor plants, particularly if they are subject to a dry atmosphere.

TREES AND SHRUBS.

THE CRICKET-BAT WILLOW (C. H. F.).—The true cricket-bat Willow is an upright-growing form of *Salix alba cærulea*. Cuttings may be obtained from Mr. Shaw of Messrs. Shaw and Shrewsbury, cricket and general sports outfitters, Nottigham, or the Estate Agent, Estate Office, Copped Hall, near Epping, might be able and willing to give other addresses.

UNCOMMON WALL SHRUBS (David).—The following kinds of shrubby plants will be suitable for your walls. Some bear showy flowers in May, and others are remarkable for coloured fruit and foliage in autumn: *Ceanothus rigidus*, *C. veitchianus*, *Halesia corymbosa*, *Crataegus crenulata*, *Cotoneaster bullata*, *Clematis montana rubens*, *Vitis Henryi*, *Vitis Thunbergii*, *Escallonia exoniensis*, *E. langleyensis*, *Magnolia Watsonii*, *Sophora vicifolia*, *Abelia triflora*, *A. florihunda*, *Jasminum humile*, *Actinidia chinensis*, *Lonicera sempervirens*, *L. Henryi*, *Viburnum macrocephalum* and *V. utile*.

ORANGE TREES (M. P. H.).—From the appearance of the leaves of your Orange trees sent for examination, we have no hesitation in saying that root trouble is the source of the mischief. One or more of several things may have caused this. Defective drainage, improper soil, or over-watering would all be conducive to such a condition. We suggest that the plants be turned out of their pots and the roots examined. If the drainage is bad, remove it and supply fresh, while, if the roots do not appear to be healthy or the soil seems to be sour, remove as much of the soil as possible from among the roots with the aid of a pointed stick. Then repot in clean pots which have been well drained with thoroughly clean crocks, and repot into a compost made up of three parts good fibrous loam (not broken very small), half a part leaf-mould, and half a part broken sandstone and coarse sand. A small quantity of half-inch bones may be mixed with the soil if the roots are fairly healthy. Do not give any pots larger than is absolutely necessary, and root

firmly. After potting, place the plants in a moderately close and moist house which can be shaded from bright sun, and keep the plants well syringed several times daily. Water very carefully at the roots. About August stand the plants out of doors for a month or so; then remove them to a greenhouse for the winter.

ROSE GARDEN.

ORANGE FUNGUS AND BLACK SPOT (W. G.).—The two Roses are rather badly attacked by the two fungi named above. The red rust, or orange fungus, is so abundant on wild Roses generally that it is almost impossible to keep it from our cultivated Roses. The fungus will live through the winter, so that all leaves from affected plants should be burnt, and if they are carefully gathered up, and those on the bushes removed also, and put into a fire, much, if not all, of the fungus will be destroyed. Where trouble has previously existed, the bushes should be sprayed in spring, just when the leaves are expanding, with a solution of sulphide of potassium (one ounce to ten gallons of water), and if the rust appears in the wood, paint the parts with a solution of methylated spirit and water in equal parts. Black spot is a fungus that does not appear much before midsummer. Badly-diseased leaves should be removed and burnt. There is at present no known cure for black spot, but spraying with Bordeaux mixture, if commenced early enough, will certainly help to keep it in subjection.

MARECHAL NIEL (A. R.).—When one is able to devote the whole greenhouse to a plant of this Rose, the best method of treatment is as follows: The two main branches should be brought down and trained horizontally, one to the right and the other to the left. As we assume at present these two growths are growing perpendicularly, or nearly so, on the roof, you should now fit the roof with wires about fourteen inches apart, as for Vines, and retain one young growth for each wire, rubbing off all the others, as we understand from your letter that you have cut back the growths that have blossomed almost to their base. During the summer suppress all growths, excepting those in the wires, and encourage these latter all you can by liberally watering with liquid manure at intervals. Plenty of solar heat and atmospheric moisture will also assist growth immensely, so that to secure the heat you must not give too much ventilation, and be careful to close the house at 4 p.m. If the plant is a really thrifty one, your rods will reach the top of the wires, and probably more; but do not check them in any way, as they will cease growing in late autumn. From these rods the next season's crop of blooms are obtained, and the object should be to see that they are well ripened by the autumn. In the spring, when the buds seem to be ready to start, release the rods and let them droop away from the roof for a time, so that the lower eyes may start out also. As soon as the blooming has ended, these rods are cut down to the main arms again, and the same process is adopted for the new rods next summer.

FRUIT GARDEN.

APPLE TREE (L. H.).—Your tree is attacked by the canker fungus (*Nectria ditissima*). Cut out and burn the affected branches, and paint the wounds with lead paint or Stockholm tar.

PEARS CANKERING (G. H.).—The fungus causing the cracking of Pears is, no doubt, the Pear scab fungus (*Fusicladium pyrami*). It attacks not only the fruit, but leaves and shoots as well, and spraying should be done with Bordeaux mixture before the buds open, and again as soon as the petals have fallen.

YOUNG VINES SHANKING (N. M.).—It is not an uncommon thing to see Grapes shanking on young Vines such as yours when bearing only two or three bunches. What is the cause of it in such cases it is difficult to say, but we think it must be in consequence of derangement in the flow and distribution of the sap to the branches, some one or more constituents necessary to the healthy development of the berries being absent. If the Vines are robust and healthy, you will find this will disappear as the Vines come into normal bearing. If the Vines are not robust, then the trouble must be looked for at the roots. Shankling is not an inherited disease.

PYRAMID GOOSEBERRY TREES (J. B.).—To grow Gooseberries for profit there is no better way than to grow them as bushes in the ordinary way. Grown as pyramids the trees are more ornamental, and the fruit is more exposed and easily picked. The way to train these is to encourage the centre branch to grow upwards, and to prune the side shoots so as to form a cone. Your best way would be to buy young trees with the foundation of this training laid, notice how they are pruned, and follow the example. They can be bought very cheaply.

KITCHEN GARDEN.

TOMATOES (P. J.).—We have been unable to find any trace of insect or fungus on the Tomatoes to account for the discoloration of the foliage. It is probable that they have insufficient potash, and we should recommend you to try watering with sulphate of potash now and then at the rate of 1½oz. to the three-gallon can.

POTATO STEM ATTACKED (H. C. R.).—The grub feeding in the stem of the Potato is that of the minute moths (*Microlepidoptera*), but we are not sure of the species. It has been met with two or three times this year, but we can find no record of its occurrence in these islands before, though it is reported from Algeria. It would be well if you could breed out the moth so that it could be identified.

TIME TO SOW VARIOUS SEEDS (S. H.).—Too early sowing is usually the cause of Cabbage bolting in spring. The following Cabbage may be safely sown on August 10: Sutton's April Flower of Spring and Ellam's Early, also Offenham and Feltham. Enfield Market should be sown ten days later. You may make a small sowing of the Onions mentioned now (these will make fine bulbs if they do not bolt). Your main sowing should take place about August 12, the object being to get fairly strong plants before the winter, but not too large or strong.

MISCELLANEOUS.

"JULIENNE" (L. E. D.).—The name of Julienne is applied to several plants, but it is likely that the one to which you refer is *Hesperis matronalis*, belonging to the Order Cruciferae, and known under the various names of Julienne, Julienne des Jardins, Dame's Violet and Rocket. It is usually treated as a biennial, and seeds are sown about May or June one year to produce plants to bloom about the same time the following year; sometimes, however, plants may be kept for several years. There are numerous forms which differ principally in the colour of the flowers, but one form has double flowers. Other plants to which the name of Julienne is applied are *Malcolmia maritima* (Julienne de Mahon) and *Barbarea vulgaris* (Julienne Jaune or Yellow Rocket-Herb); the former is a cruciferous plant found wild on the shores of Kent, but not truly British, its home being in Southern Europe. It has small white or purplish flowers. *Barbarea vulgaris* is a British plant, which is known as Land Cress or Common Winter Cress. A common weed, it is found in gardens on waste land, &c. The flowers are yellow. A cultivated form with double flowers is the French *Julienne Jaune*, the type in France being spoken of as *Barbaree* or *Herbe de St. Barbe*. This also belongs to the Cruciferae, though we suggest that the common Rocket is possibly the plant you require. It would not be difficult for you to obtain all three; then you could decide which is the plant you require. Messrs. Backhouse, nurserymen, of York would doubtless be able to supply the specimens, for they include in their business a scientific branch for the purpose of supplying schools, institutions, &c., with specimens.

NAMES OF PLANTS.—Colonel H. M.—*Veronica ligustrifolia*; *B. Veronica speciosa*.—*M. A. R. C., Lincoln*.—*Thilia platyphyllos asplenifolia*.—*M. M. M.*—The fungus was beyond recognition on arrival. Kindly send again.—*P. H.*—*Robinia Pseudacacia dubia*.—*M. M. A.*—*Tragopogon pratense*.—*Mrs. E. B.*—*Good-yera repens*.—*W. Steedman*.—*Asplenium Filix-femina ramosa*.—*A. G., Awerkyne*.—*Linaria repens*; 2, *Dianthus deltoides albus*; 3, *D. Squieri* variety.—*Lady Evelyn Mason*.—1, *Lavandula spica nana compacta* (Dwarf French Lavender); 2, *L. spica* (the Old English Lavender).

SOCIETIES.

SOUTHAMPTON JUBILEE SHOW.

THE council are to be highly congratulated on the successful exhibition held at the County Ground, Southampton, on July 16 and 17. The weather was exceedingly hot, and reminded one of the sweltering days of July, 1911. By a judicious system of ventilation the tents were kept fairly cool, and this condition was much appreciated by exhibitors and public alike. The exhibition was one of the best that the society have held in Southampton; the arrangement of the numerous exhibits was, as usual, perfect, and reflects much credit on the courteous secretary, Mr. Fuidge, and the members of the council.

Carnations, Sweet Peas, vegetables, fruit, Roses, herbaceous and alpine plants and cut flowers, groups of miscellaneous plants and table decorations made a magnificent display; particularly fine were the exhibits of Messrs. Ladhams, Limited, Messrs. W. H. Rogers and Sons, Limited, Messrs. Webb and Sons, The Locksheath Nurseries and Messrs. Toogood and Sons. There were twenty-eight dinner-tables in competition, all lovely; they constituted a show in themselves. In such keen competition Miss Minnie Snellgrove won the two first prizes, and in an equally keen competition the first prize in the class for the most elegant epergne. Mr. Parton of Birmingham finally won the silver challenge cup in the amateurs' division for Carnations and Picotees. He again made the highest aggregate number of points in the vase classes, staging blooms of wonderful purity and freshness. Mr. James Douglas, Great Bookham, was a prominent prize-winner; he had grand flowers, which were greatly admired.

CARNATIONS.

In Class 1, for twelve vases of selfs, fancies and yellow-ground Picotees, Mr. Douglas won first position. Purity (premier bloom), Liberté, Pasquin, John Ruskin and Togo were very fine blooms. Second honours went to Messrs. Arthur R. Brown, Limited, Birmingham, a firm that staged some grand flowers; third, Mr. H. Mathias.

For four vases of Carnations, selfs, Mr. Douglas was first, Mr. Mathias second and Messrs. A. R. Brown third. Mr. Douglas had the best four vases of Carnations, fancies, Messrs. A. R. Brown and Mathias being second and third respectively.

Messrs. Brown and Douglas won in the order named in the class for four vases of Carnations, white-ground fancies.

In Classes 5, 6, 7 and 8 Mr. Douglas was the winner. In Division II, Mr. Parton won nearly all the first prizes, Mr. Linzee and Mr. J. H. Linington being also prominent prize-winners.

Mr. Linzee was very successful in the classes for dressed blooms on boards.

SWEET PEAS.

In the class for twelve distinct varieties Mr. Bealing was first. Mr. W. Bird, gardener to Miss Read, and Mr. R. Lawrence were second and third respectively. Stirling Stent, W. R. Beaver and E. Pearson were grand blooms in the first-prize collection.

Mr. F. Green had the best six varieties, Melba, Nettie Jenkins and Thomas Stevenson being fine blooms; second, Mr. Regan; third, Mr. G. Barnes.

Messrs. Toogood and Sons' first prize for nine distinct kinds was won by Mr. Usher, gardener to Sir R. Baker, Bart., M.P. He had Barbara, Thomas Stevenson, Nubian and Money-maker in fine condition. Second, Mr. Bealing. Some exhibits in this class were disqualified.

The first prize for nine distinct varieties, offered by Mr. Robert Sydenham, Birmingham, was won by Mr. Bealing.

Mr. Usher won the first prize for six bunches, offered by Messrs. Sutton and Sons; second, Mr. Hodson.

Mr. Bealing had the best vase of Sutton's Queen Sweet Pea.

Mr. Usher won the first prize for the best eight varieties, offered by Messrs. Webb and Sons; and also the first prize for six varieties, offered by Messrs. James Carter and Co.

ROSES.

The challenge trophy, for a representative group of cut Roses, to occupy a space not exceeding 50 square feet, offered by the Hon. Mrs. Eliot Yorke, was won by Mr. John Mattock, Oxford. It was a charming collection.

James Carter and Co., Mr. Ellwood was invincible, winning premier honours with produce of the highest quality, neatly staged.

MISCELLANEOUS SECTION.

Mr. E. Wills, Southampton, won in the open class for a group of miscellaneous plants arranged for effect; second, Mr. Turner, gardener to the Hon. Mrs. Eliot Yorke; third, Mr. Bealing.

In the class for a group arranged in a space of 80 square feet, Mr. T. Hall was the winner, also for a single flowering plant, staging *Clerodendron fallax*.

Mr. Hall scored in the classes for six *Caladiums* and six *Zonal Pelargoniums* respectively.

The heavily-laden fruit trees in pots exhibited by The Lockshead Nurseries were very fine, and attracted much attention.

NON-COMPETITIVE EXHIBITS.

Gold Medals.—To Mr. H. Burnett for Carnations; Messrs. E. Webb and Sons for vegetables, fruit and flowers; Messrs. H. B. May and Sons for Ferns; Messrs. Toogood and Sons for Sweet Peas; Messrs. W. H. Rogers and Son, Limited, for ornamental shrubs, Roses and rockery plants; Messrs. B. Ladhams, Limited, for rock garden, Roses and herbaceous cut flowers; and The Lockshead Nurseries for Carnations and fruit trees in pots.

Silver-gilt Medals.—To Messrs. A. R. Bide and Sons for Sweet Peas; Mr. C. W. Breadmore for Sweet Peas; Messrs. Jarman and Co. for cut flowers; Messrs. E. W. King and Co. for Sweet Peas; Mr. F. Longster for miscellaneous plants and Sweet Peas; and Mr. J. Stevenson for Sweet Peas.

The silver Rose bowl was won by Messrs. Frank Cant and Co., Colchester, who staged a fine lot of blooms; closely followed by Messrs. Harkness, last year's winners.

Mr. R. F. Felton very kindly decorated a table with Carnations and Asparagus Fern, which was most tastefully finished with the simplest devices, this being the primary object. He also helped with the judging of the tables and other floral classes.

There were ten entries in the class for table decorations, and the first prize fell to Mrs. Thomas for an artistic arrangement of Sweet Peas.

The trade exhibitors were represented by Messrs. W. Cuthbush and Sons, Barnet, who showed Roses and other flowers; Messrs. H. Newman and Son, Watford, Sweet Peas, Violas and sundries; Messrs. Gleeson and Co., herbaceous plants, &c.; and Messrs. Thomson and Charman, alpine and herbaceous plants.

LIVERPOOL HORTICULTURAL ASSOCIATION.

This society held a most successful show in the Corn Exchange, Liverpool, on the 17th inst., the exhibits filling every portion of the hall. Unfortunately, the hot weather had proved too much for the Queen of Flowers, so that a number of entries were not forthcoming. The general exhibits were somewhat undersized, but excellent in colour. The Sweet Peas were a great advance on anything yet seen in Liverpool, both in quantity and quality.

Roses.—Eighteen Hybrid Teas had only one exhibit, which secured the first prize for Mr. J. W. Parker, gardener to J. R. Dixon-Nuttall, Esq., Prescott.

For eighteen blooms, distinct, Mr. Parker was again the victor, his *Lyon* and *Lady Ashdown* being noteworthy.

For twelve blooms Mr. Aindow of Formby led with a handsome lot of well-shaped flowers; for six blooms Mr. W. Foulkes was first.

For twelve, in not less than six varieties, amateurs only, Mr. L. Thomson took the first; and for six blooms Mr. P. Fitzpatrick secured the favoured position. Mr. C. Green had the best vases, and Mr. C. Haeckey was the winner in the members' class.

Sweet Peas.—The class for twenty vases brought out a strong competition. Mr. W. Davies, gardener to Dr. G. H. Phillips, occupying the place of honour with fine flowers of excellent substance. Mr. R. R. Anderson proved a good second. Mr. W. Bond, gardener to J. P. Heron, Esq., also staged well.

For twelve vases Mr. W. Davies was again the victor, his *Nubian*, *Thomas Stevenson* and *Mrs. Harcastle Sykes* being extra good. Mr. H. Foulkes, gardener to Major F. M. Roome, Formby, and Mr. E. T. Barrett, gardener to E. Cozens-Hardy, Esq., Woolton, won the other prizes.

For a like number of waved standards Mr. H. Foulkes took the leading position with a good stand.

For twelve vases, distinct, Mr. J. George, gardener to Mr. T. Heushaw of Roby, was first; also for a similar number locally grown.

Mr. W. Bond secured Messrs. Sutton's special prize for Sutton's Queen.

For twelve vases, amateurs only, Mr. J. Roberts of Grosford had the leading lot; and for six Mr. R. Aindow was first. For the waved selection Mr. G. Faulkner proved successful. Messrs. E. J. Procter and J. Tapscott proved the champions in the members' section.

For a table of Sweet Peas Miss Newsham held the place of honour in strong competition, Mrs. H. E. Marsh winning for the table other than Sweet Peas with pleasing single bronze-coloured Roses.

Herbaceous Cut Flowers.—These were shown in quantity and enhanced the appearance with changes of colouring. Mr. J. George and Mr. Parker gave evidence that these flowers are still well cared for by some. Messrs. E. Sergenson and J. Green contributing their quota as amateurs.

Carnations and Picotees were well represented, Ann Hathaway, Miss Peggy and Lady Willmott being charming. The chief awards went to Messrs. James Calder, H. S. Barrett, R. Duke, E. Sergenson and J. Green.

Mr. Turnbull had the best *Pansies* and *Violas*; while Mr. W. A. Crippen showed the beauties of the single and double flowered *Begonias*.

Non-competitive.—Gold medals appeared to be dealt out with a free hand. These were awarded to Mr. R. Manson for a fine display of Roses; Messrs. R. P. Ker and Sons, miscellaneous plants, fruits and vegetables; Liverpool Orchid Company, Orchids and cut Roses; Mr. H. Middlehurst, Mr. R. Wright, Messrs. Aldersey and Marsden Jones, each for a collection of Sweet Peas; Messrs. Dicksons, Chester, Gladioli, Roses, &c.; and Bees, Limited, alpine plants and cut flowers.

Silver Medals.—Messrs. C. A. Young, West Derby, and C. Russell of Blandfords for Carnations and Picotees; the Covent Garden Company, herbaceous cut flowers; Mr. W. Rowlands, Childwall Nurseries, Roses; Messrs. Jones Brothers, assorted cut flowers; Messrs. Aitken and Faulkner, Tarvin, Sweet Peas; Messrs. Fishlock Brothers, floral decorations; and Mr. W. Hodgkinson, Gloxinias in pots.



A MAGNIFICENT COLLECTION OF VEGETABLES SHOWN BY MR. E. BECKETT AT THE ELSTREE SHOW.

Second honours went to Messrs. W. H. Rogers and Son, Limited, Southampton, who also had a lovely group.

Messrs. Perkins and Sons, Coventry, were first in the class for twenty-four cut blooms, distinct. *Avoca*, *Duchess of Sutherland*, *The Lyon Rose*, *Caroline Testout* and *Queen of Spain* were the best flowers. Messrs. D. Prior and Sons, Colchester, and Mr. Mattock were second and third respectively.

Messrs. Perkins, Prior and Mattock won in the order named in the class for twelve Roses, Teas or Noisettes.

Mr. Nicklen, gardener to Alan Searle, Esq., had the best nine, distinct, exhibition or decorative; and Dr. Lamplough the best twelve Roses, distinct.

FRUIT AND VEGETABLES.

These were of high quality and extensively shown. Mr. Baxter, gardener to Captain Dalgety, Ronsey, had fine Grapes, Peaches, Nectarines and a grand Melon in his first-prize collection of six distinct varieties of fruit.

Mr. Hall, gardener to Ellen Lady Swaythling, staged four perfect bunches of *Madresfield Court* Grapes, and won first prize.

Mr. W. Hall, gardener to Major Chichester, had the best pair of bunches in the class for two of white, staging *Muscot* of Alexandria.

Mr. T. Hall scored in the class for two bunches of black, staging *Madresfield Court*.

Mr. Ellwood, gardener to W. H. Myers, Esq., had the best green-fleshed Melon.

The Lockshead Nurseries had the best dishes of Peaches and Nectarines respectively.

In the classes for collections of vegetables, the prizes being offered by Messrs. Toogood and Sons, Messrs. Sutton and Sons, Messrs. Webb and Sons and Messrs.

Silver Medals.—To Mr. W. E. Alsen for Sweet Peas; Mr. H. Ellison for Cacti; Messrs. Wells and Co. for Carnations; Mr. C. Fay for Carnations; and Messrs. Hillier and Sons for Roses.

Award of Merit.—To Mr. Maurice Prichard for cut flowers of herbaceous plants.

ELSTREE AND BOREHAM WOOD HORTICULTURAL SHOW.

This society held its fourth summer show on July 10, and was again favoured with brilliant weather. Since its formation the society has been fortunate in having such ideal surroundings as the park and grounds of Aldenham House, kindly placed at their disposal by Lord Aldenham and the Hon. Vicary Gibbs, and the continued success is largely due to the kindly interest extended by these gentlemen. This year experienced a record attendance, also an increased number of entries in the competitive classes, and both in the open amateurs' and cottagers' classes excellent exhibits were staged. The honorary and trade exhibits were arranged in a separate marquee, and evoked considerable interest. At either end was a line group staged by the president (gardener, Mr. E. Beckett, V.M.H.), which were awarded a gold medal. One consisted of a fine collection of vegetables, one of the largest ever exhibited, including about a hundred dishes of excellent varieties, and the other was a model water garden, depicting a stream planted with *Water Lilies* and other aquatics, the banks and background being planted with *Rushes* and flowering subjects.

Edgar Greenwood, Esq. (gardener, Mr. G. Capell), staged a group of well-grown specimens of *Hydrangeas* and *Coleus*, and was awarded a silver medal.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

*The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.*

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Variation in Black Currant Boskoop Giant.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. Charles Pearson sent shoots of Black Currant Boskoop Giant to illustrate a variation which had apparently suddenly arisen in several localities. The leaves become much more dentate and the bushes fail to fruit. Sometimes only a portion of the bush is so affected, but frequently the whole, and in one plantation 50 per cent. of the bushes showed the variation. The committee would welcome any observations that would throw light upon the phenomenon. It has been suggested that possibly hard pruning may have brought about the result, but there is no record so far of reversion.

A Beautiful Hardy Heath.—*Erica cinerea* is our commonest British Heath, for, in companionship with the Ling (*Calluna vulgaris*), it is met with in all parts of the country covering commons and hillsides and making a blaze of colour from July to September. Although some difference of colour is noticeable among plants growing under natural conditions, there is no great variation from the typical crimson-purple. Horticulturists, however, have developed a number of varieties which differ widely in colour of flowers from the type, thus providing an excellent group of plants for the garden. Of these varieties alba and alba minor, with white flowers; *purpurea* and *atropurpurea*, with light and deep purple respectively; *atrosanguinea*, with deep red; *coccinea*, with scarlet; and *rosea*, with rose-coloured flowers, are among the most conspicuous. With the type and this set of varieties it is possible to create a very showy feature either in the wild garden, in beds on the lawn, or in the rock garden, the effect being, of course, most pleasing when each kind is used separately and with a generous hand.

Origin of Sweet Pea Countess Spencer.—The current issue of the Journal of the Royal Horticultural Society contains some new and interesting particulars concerning the origination of Sweet Pea Countess Spencer, the first variety with a waved standard. As all the world knows, Mr. Cole, at that time gardener to Earl Spencer, raised it in 1901, first by crossing *Lovely* with *Triumph*, and then the best of the progeny of that cross with *Prima Donna*. Now, in a letter to Mr. W. Cuthbertson, J.P., relating to a lecture on Sweet Peas given by him before the Royal Horticultural Society, Mr. Viner of Somerset Road, Frome, states that in 1901 he saw a spray of what we now know as *Countess Spencer* in *Prima Donna*, the seeds of which he saved, and the following year five out of seven plants retained the waved character. Blooms from these were shown at the Bath Show in July that year under the name of *Nellie Viner* and gained a certificate. Eventually Mr. Viner

disposed of the stock to Mr. Henry Eckford, who, learning that the variety *Countess Spencer* was similar, dropped the name of *Nellie Viner* and put his stock on the market as a superior *Countess Spencer*. Mr. Cuthbertson, in sending Mr. Viner's letter to the Royal Horticultural Society, states that he is practically convinced that *Countess Spencer* appeared as a mutation in *Prima Donna* in several places in Great Britain the same season.

The Flowering Rush.—The Flowering Rush (*Butomus umbellatus*) is an instance of a common British plant which is well worth introducing into the garden where it does not already exist, for several instances have been noted lately where its use has been attended by the happiest results. A marsh or water loving plant, it is excellent for using about the margins of a lake or stream, where it makes a change from the all too common Sweet Flag (*Acorus Calamus*). The Flowering Rush grows 3 feet to 4 feet high, and is so-called on account of its Rush-like foliage. That it is quite distinct from the ordinary Rushes is evident by its large umbels of rosy red flowers, terminating tall stems, which appear from late June to August, according to the locality. During the hot days of summer the bog and water garden, especially the latter, have a peculiar charm, and the opportunity should not be lost of jotting down any particularly effective plant with an eye to its introduction to other quarters at a fitting season. It is also a good time to plan alterations and a redistribution of plants, and while this is being done we specially commend the species under notice to the gardener's attention.

Australian Pepper.—Under this heading, in answer to a correspondent ("T. B. F.") on page 359 of our issue for July 13, we gave the name of the Australian Pepper Plant as *Piper Novæ-Hollandiæ*, which was perfectly correct, though the name Pepper Plant is also ascribed to *Drimys aromatica*. Some further facts relating to these two plants may be of interest to our correspondent, as well as to our readers generally. The Piper, which in the vernacular is known as the Climbing Pepper or Native Pepper Vine, is a native of New South Wales and Queensland, and is one of the largest Australian creepers, climbing, like Ivy, to the tops of the tallest trees. At one time it was well known in Australian medicine, having the reputation of being "an excellent stimulant tonic to the mucous membrane." The wood is coarse-grained, and very pungent when freshly cut. *Drimys aromatica* is a close ally to the well-known Winter's Bark Tree of the Straits of Magellan (*D. Winteri*), belonging to the Natural Order Magnoliaceæ, and at one time noted as an aromatic tonic. *D. aromatica* is a native of Tasmania, Victoria and New South Wales, where the fruit is used as a condiment. The leaves have a pungent cinnamon-like flavour, hence probably its name of Pepper Tree.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Myxomycetes.—In our note to Mr. Watts' letter on exhibiting Daffodils, which appeared on page 374 of last week's issue, this word, owing to a misprint, appeared as "Myxomyates."

Curious Laburnums.—There are quite a number of specimens of *Laburnum Adami* in Scotland. The curious thing is that people are so slow to learn of the existence of *Laburnum Adami*, although it is a comparatively common tree in places where out-of-the-way subjects of the kind are cultivated.—S. ARNOTT.

An Early Pear.—Pear Doyenné de Eté is very delicious this season and quite ready for use. The blackbirds find this out very quickly, and nets must be at once put over the tree, or the birds will soon make short work of the fruits, as they are very sweet and juicy. Anyone not growing this very early variety should make a note of it and plant it in the autumn. It is a free-growing variety and crops in a prolific manner. The fruits should, however, be consumed as gathered from the tree, as they will not keep.—W. A. COOK.

Rambler Roses.—I have never seen the flowers more richly coloured than they are this season. The variety Dorothy Perkins is flowering and growing more freely than in previous years, and the blossoms are very rich in colour. Many strong young shoots are growing beyond the trusses of flowers, and, unless they are required for filling up space, they must be cut out. The older wood should also be freely cut away where there are plenty of strong young shoots to take its place. This work ought not to be left until the end of the autumn or next spring, but be done at once.—B.

Rose Lady Godiva as a Weeping Standard.—I was glad to see the note on the above in THE GARDEN of July 27. Lady Godiva is really one of the very best Roses for this purpose, its slender, pliant growth and its lovely flowers giving it a most beautiful appearance when so grown. I saw, the other day, some fine weeping standards of Leuchstern, Gardenia, Una, Flora, Hiawatha, Aglaia, Ruby Queen, Dorothy Perkins and others, and none could surpass Lady Godiva in elegance. Gardenia is very fine in its way. By the way, I am glad to see that the writer of the note has a high opinion of Leontine Gervaise, which in my garden is one of the most beautifully coloured among a rather good variety of rambling Roses.—SUB ROSA.

Rose Conrad F. Meyer.—We can all appreciate "Avon's" remarks on this Rose, published in THE GARDEN recently. This plant is generally considered an obstinate Rose to grow practically in all parts of the country. "Avon" says he has seen a fine plant in the South. There is also here in Midlothian a fine specimen of this Rose growing over an arch doing as well as one could wish for. About a fortnight ago it was showing over four hundred blooms, and has every prospect of flowering for another month and more. The fault lies, as a rule, in trying to grow this Rose as a bush, and, in consequence, being severely pruned. This Rose simply hates the knife, and should hardly be pruned at all; but if allowed to grow over an arch or a similar device it will, I am sure, give every satisfaction by flowering profusely from June to September.—H. J. S.

Rosa nitida.—Lovers of the Rose species always find in the little *Rosa nitida* a plant worthy of admiration at practically any season. At present its main attractions lie in its glossy foliage and its lovely bright red or deep pink flowers, which are being very freely borne this season. Possibly, however, these charms of the summer are eclipsed by those of autumn, when the foliage passes off through shades of red, orange, &c., to almost purple, and when the branches show their deep red colouring, and the hips, which come freely, their bright scarlet among the foliage. *R. nitida* is only about two feet high, and as it grows freely it can be planted with confidence. It does not appear too fastidious as to soil, but I think it colours best on a poor and rather dry one. It soon increases by means of suckers.—S. A.

Rose Tea Rambler in Cold Districts.—Experience of the lovely Rose Tea Rambler modifies the high opinion one formed of it at first, and for cold districts or those subject to late frosts in spring it is to be feared a word of caution is necessary. It makes strong growths, which, however, are late in ripening and very liable to be destroyed in spring. This is the experience of the writer, but it is by no means an isolated one, as one finds on making enquiries among others who have tried this really beautiful Rose. It has many points of beauty, from its handsome foliage, the young strong shoots of which are so finely coloured, to the delightful flowers. One is, therefore, reluctant to do without it, yet a succession of seasons in which it has been badly cut makes one long for something like Tea Rambler, but more capable of standing late frosts in the colder parts of the country.—A.

The Scarlet Martagon Lily.—*Lilium chalcidonicum* shares with *L. croceum* and *L. candidum* the credit of being one of the best of garden Lilies, while the disease which often proves fatal to *L. candidum* does not trouble it. A member of the Martagon group, *L. chalcidonicum* always arrests attention by reason of its prettily-reflexed, bright red blossoms, which are, as a rule, borne from early in July onwards. In common with several others of the Martagon section, the stem roots are but sparingly produced; therefore the main support of the plant is derived from the stout, thong-like roots at the base of the bulb. From this circumstance it will be readily understood that *L. chalcidonicum* is scarcely likely to be seen at its best the first season after planting; indeed, it takes two or three years to become thoroughly at home. A deep, well-drained loam suits it well, and this, combined with its objection to removal, accounts for this Lily being frequently seen at its best in cottage or farmstead gardens, where the practice of letting well alone prevails to a great extent, and changes are decidedly infrequent.—H. P.

Fruiting of the Mulberry Tree.—In reference to the note on the flowering and fruiting of the Mulberry tree, page 361, July 20 issue, I should like to state what my observations lead me to think is the cause of fruit only being produced upon some branches and only catkins upon others. On taking charge of the garden here some twelve years ago, I advised my employer to let me cut back many branches of a very large old tree which overhung the grass and borders too much, and I continued to prune rather freely for the first four years. I did not notice any great difference in the fruitfulness of those branches not cut till three years ago, and this season it is more marked than ever, the parts pruned back being full of vigour and bearing berries only. Those branches that

have not been cut back have a very starved appearance and produce catkins only. I should, therefore, think the cause lies in the pruning and the fact that a large tree in full vigour so shades itself in various parts that its branches do not all get matured alike.—W. MANNING, *The Hermitage, Leawisham Hill, S.E.*

Judges Judged.—I was much interested in Mr. Jenkins' letters in the issues of THE GARDEN dated July 20 and July 27 respectively in reference to the disqualifications at the recent National Sweet Pea Society's Show. In my usual notes on the Queen of Annuals I alluded to the subject and took the same view as Mr. Jenkins—that the judges had no power to go beyond disqualification. My firm opinion is that the rules of a society are equally as binding on the judges as they are on the exhibitors, but this is not accepted by many adjudicators. I think it would be for the general good of horticultural shows if the Editor would secure the views of such renowned judges as Messrs. Owen Thomas, S. T. Wright, J. Jaques, James Hudson, N. F. Barnes, A. Mackellar and others who could be easily mentioned. The point is: Can judges alter the rules of a society to suit an occurrence? The question of double standards in Sweet Peas has no bearing on the principle involved.—HORACE J. WRIGHT.

—Mr. Jenkins, in his letter which appears on page 374, issue July 27, raises a very important point as to the legality of the action of the judges at the National Sweet Pea Society's recent show. As he rightly points out, the judges, in recommending for prizes exhibits that contained double standards, advised the committee to break a rule that was plainly printed in the regulations for exhibitors. That the committee, or at least those members of it who were present, should have consented to such an arrangement is, to say the least of it, astonishing, and, one would imagine, illegal. As one who has taken considerable interest in the Sweet Pea and its society, I must protest against such quixotic proceedings, which are not in keeping with the dignity of a National Society and against all recognised rules of judging.—A. B. ESSEX.

Rose Society for the City of London.—It has been suggested to me by several amateur Rose-growers that a Rose society should be formed exclusively for City people. The primary object would be to hold an annual show in the heart of the City. I am convinced that there is ample room for such a society. There must be a very large number of keen rosarians among our City workers, as indeed a casual examination of "button-holes" during the Rose season amply testifies. They would, I am sure, welcome an exhibition of Roses in their midst, for only a comparatively small number can afford the time to attend the metropolitan exhibition of the National Rose Society or similar shows. The schedule would, naturally, include classes to suit the smaller as well as the large growers, and I think should also have special ones for those dwelling within five and ten miles of the City boundary. Thus exhibitors would be competing against those who have to cultivate their Roses under similar conditions, and this would foster a spirit of keen but friendly rivalry between the various suburbs. I shall be very pleased to receive names and City addresses of those who would be willing to join in the formation of such a society, from which a committee could be formed to carry out the working details.—A. ERNEST PROTHEROE, 67 and 68, *Cheapside, E.C.*

The French Honeysuckle after Flowering.—This handsome shrubby plant is flowering with its wonted freedom with me this season, and the question arises whether it is preferable to cut it well back after flowering, or simply to trim the branches so as to keep the bush in the desired form. Each method has its advantages, and the former would appeal to those who want a compact bush, the latter suiting those who wish to have a tall and more loosely-disposed shrub. Its nominal height is stated as from 2 feet to 5 feet, and it can be had at either, according to the practice of pruning adopted. In any case it is a handsome plant with its racemes of from eight to ten flowers of a nice vermilion pink in the axils of the leaves. With me it is remarkably slow of showing growth each season, and to those who have not seen it before it looks as if it were dead until June, when it begins to show its foliage in a half-shaded place, which suits it well here and in dry soil.—S. ARNOTT, *Dumfries*.

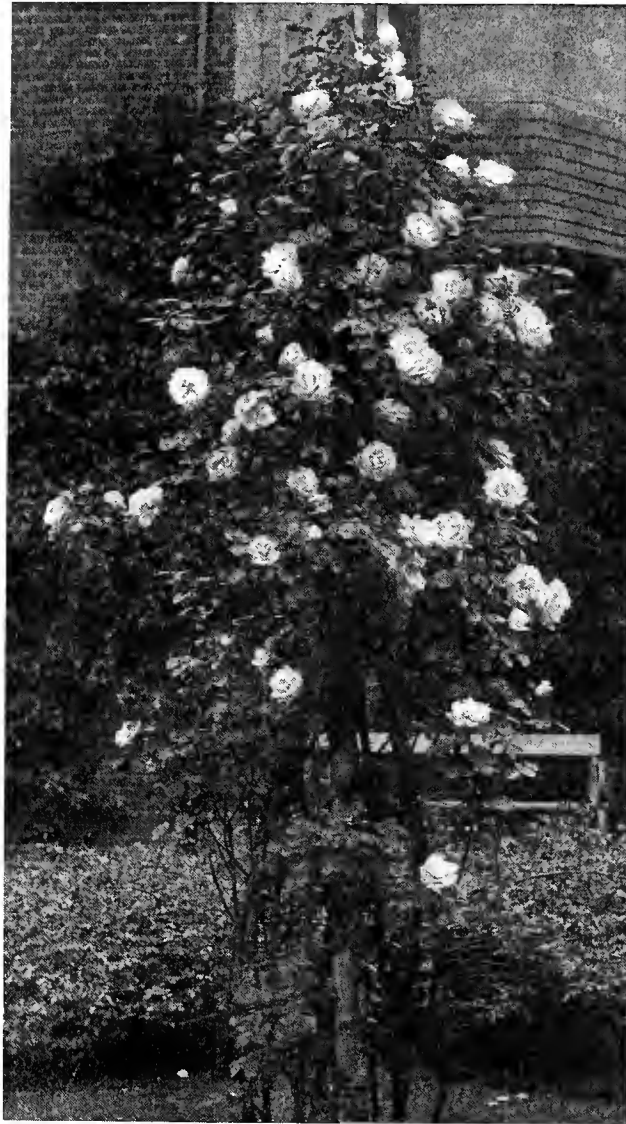
Rose Conrad F. Meyer in a London Garden.—Looking up a note about this Rose, I find it was photographed on May 23, the earliest date, by the way, it has ever been so well advanced. The waiting of another couple of days would have given a better picture, I afterwards found, but the weather looked threatening, and so we made sure of what is now seen. The plant is about ten feet high, healthy and vigorous. Two years ago, thinking it was making too much top growth, we root-pruned it, an operation which has, apparently, justified itself. A most peculiar procedure has taken place this month with one of the strongest shoots. After growing strongly for some five feet, a growth has developed an unusual flower-head, consisting of twenty-five healthy buds, below this again being another shoot about a foot in length, which will go on and complete the ordinary length of growth. We have two other specimens of this Rose between 5 feet and 6 feet high, which I struck from cuttings three or four years ago. They flower well, but the blooms are not so abundant or so large as from the pillar plant. This, however may be a matter of age. The praises given by "An Essex Reader" to this Rose are well deserved, and I, too, should judge it to be a good hedge plant. The experience of Mr. Peel Sheldon concerning this Rose is rather perplexing, particularly as he mentions his result has been identical in two different counties. Nothing being said to the contrary in his note, I wondered, as a reader, whether he transferred the plants from Hampshire to Kent. If so, it is plain his plants are, for some past reason of treatment or selection of quality of plant, liable to develop the black spot on the leaves, and the best thing to do is to destroy the plants. On the other hand, if Mr. Sheldon's plants are fresh ones, and not those from his other garden, may I suggest his communicating with the nearest Rose nursery or private grower of some repute and making a few comparisons as to soil, treatment and the appearance

of their specimens of this Rose with his own. I think this plan might throw some light on the subject, and the result would be of interest and value to all Rose note readers of THE GARDEN.—C. TURNER, *Ken View Garden, Highgate*.

FORTHCOMING EVENTS.

August 5.—Bletchley Flower Show. Machen Flower Show. Ashby-de-la-Zouch Flower Show. Atherstone Flower Show.

August 6.—Barry Flower Show. Artindale's Sweet Pea Show, at Sheffield. Leicester (Abbey



ROSE CONRAD F. MEYER IN A LONDON GARDEN.

Park) Flower Show (two days). Scottish Horticultural Association's Meeting.

August 7.—Bridgend Flower Show. St. Fagan's Flower Show. Astwood Flower Show.

August 8.—Harrogate Flower Show (two days). Madresfield Flower Show.

August 9.—Shilton Flower Show. Kirkcudbright Show. National Carnation and Picotee Society's Show at Manchester. Aberdeen and Northern Counties Sweet Pea Show (two days).

August 10.—Nelson Flower Show. Stirling Horticultural Association.

THE GREENHOUSE.

THE CULTIVATION OF THE PERSIAN CYCLAMEN.

FEW plants give the average cultivator more trouble, and few better repay good and proper treatment, than this. In only a very few gardens do we come across really fine batches of this plant. That it is not one of easy culture I must frankly admit; and having in the past had my full share of disappointments with it, I can fully sympathise with those who have hitherto failed to grow it to perfection. When badly grown, few plants give a more depressing appearance to a house or frame, while really fine specimens are among our grandest floral gems. I have grown these plants for over twenty years, and, until seven or eight years ago, with very indifferent success. Some years they were excellent, but more often miserable failures. Now, however, I invariably have a fine display each winter and spring, so a few details of my methods of culture may be of interest to some of the readers of THE GARDEN who, like myself, may be fond of this beautiful plant. As I consider that young plants are in every way more satisfactory than old bulbs, I propose to confine my remarks chiefly to the culture from the seed-sowing until the plants bloom the first time.

Sowing the Seeds.—I have sown at various times from August till January, and find that the best time is about the middle of the first-named month. Up till the middle of September will do; but if later than that, the plants will not, in my opinion, be so fine and floriferous as the early-sown ones. Select moderately deep pans 9 inches in diameter, and crock carefully and well. Over the crocks place some of the riddlings from the soil. The most suitable compost is made by mixing equal parts of the best loam and brown flaky peat, with a small quantity of leaf-mould and sufficient sharp sand to ensure the whole being kept nice and open. A few pieces of bruised charcoal may be added, if desired, as these help greatly to keep the soil sweet. Mix thoroughly and pass through a half-inch riddle. Scatter the seeds evenly and thinly, and cover with about a quarter of an inch of the soil passed through a quarter-inch riddle. Press gently, and then water with tepid water through a very fine rose. An intermediate temperature—60° to 65°—is very suitable during the autumn and winter. The pans should be covered with a sheet of glass and a piece of thick paper. As soon as growth shows, remove the paper and slightly tilt the glass. In due time the glass can be removed and the pans set on a shelf close to the glass. Shade from bright sunshine until November, and see that the soil is never allowed to become dry. At the same time, overwatering must be strictly guarded against. An occasional vaporising with XL All will keep the little plants clear of green fly, and, what is more to be dreaded, the Begonia mite, which very often attacks the Cyclamen.

Pricking Off the Seedlings.—Towards the end of January the little plants will be in the best of condition for pricking off into 2-inch pots. The same compost is suitable, with the addition of a sprinkling of Ichthemic Guano. One crock in the bottom and three or four small pieces of charcoal will afford perfect drainage. Pot very lightly, and on no account bury the little bulbs. Place the pots in ordinary cutting-boxes, in the bottoms of which spread half an inch of Cocoanut fibre or even leaf-mould. Give a good watering with tepid water to settle the soil, and then twice daily sprinkle overhead with clean tepid water from a very fine-rosed can. Vaporise as necessary to keep

from an old building, a 6-inch potful of bone-meal to each barrow-load of soil, and about half that quantity or a little more of Thomson's Plant Manure. Use the loam and peat in a fairly rough state, but pass the others through a half-inch riddle. Mix thoroughly, and use dry rather than wet. Make the soil only very moderately firm, and, as before, keep the crowns well up out of the soil. Give a good watering to settle the soil, and return to the greenhouse or pit, shading well from the sun and continuing the sprinkling overhead twice a day until October, when this should be gradually discontinued. I prefer to always grow the plants in a greenhouse or pit in preference

TREES AND SHRUBS.

A BEAUTIFUL HARDY SHRUB.

(*ESCALLONIA PHILIPPIANA*.)

THIS is the hardiest of all the Escallonias, growing in the open in the London district, for, as is well known, most of them require the shelter of a wall or belt of shrubs, except in the South and West. It is a native of Valdivia, and is one of Richard Pearce's introductions of the early seventies. *E. philippiana* forms a spreading bush some 5 feet in height. It is deciduous; with small rich green leaves. The shoots in late June and July are clothed with masses of starry white blossoms, with a fragrance suggestive of Hawthorn. Cuttings form a ready means of increasing Escallonias under glass from July to September. They thrive in a rich, well-drained, loamy soil.

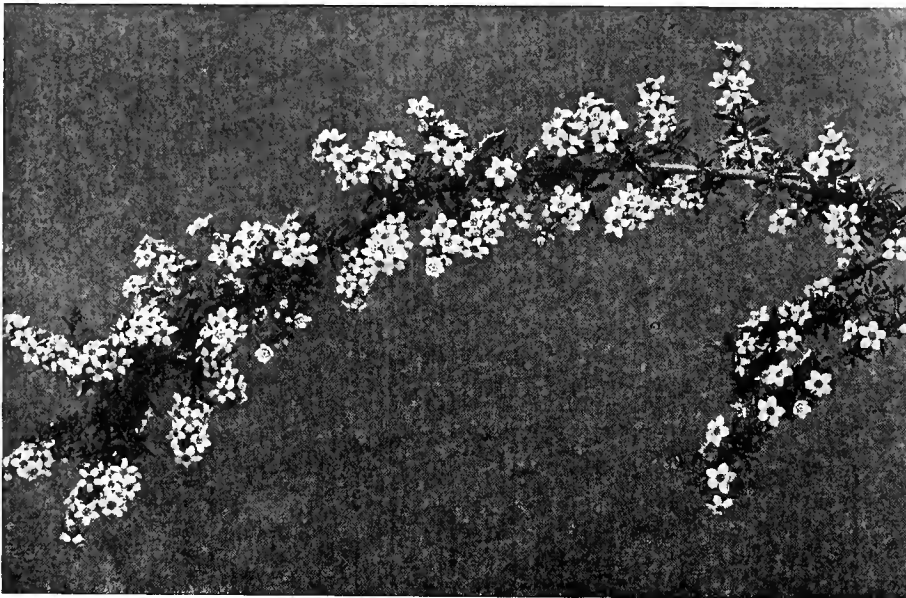
The Escallonias are well-known seaside shrubs, being frequently represented as large bushes in shrubberies, or even as hedge plants in Devon, Cornwall and similar localities. The subject of this note is also interesting as being the seed-bearing parent of the valuable hybrid *Escallonia langleyensis*, the male parent being *E. macrantha*. This hybrid comes next in point of hardiness to *E. philippiana*, the unripe tips of the shoots suffering a little during severe winters. *E. langleyensis* has rich dark green leaves and rose red flowers produced in profusion during June, with a more or less continuous supply until autumn.

WEeping TREES FOR HOT WEATHER.

THERE are many trees with weeping or pendulous branches which might well be given prominent positions on lawns, especially when the lawns are used for afternoon teas, for on a hot summer's day the shade of a large Weeping Elm or Ash is very acceptable. A shady tree in the vicinity of a tennis or croquet lawn is also a valuable asset, for spectators may then enjoy watching a game without being subjected to the full glare of the sun, a very necessary consideration when people of delicate constitution are concerned. Apart from this, pendulous-habited trees are a necessity in a large garden from a landscape point of view, particularly in the vicinity of water, for they tend to relieve the monotony of trees of more rigid outline. Some consideration must be given, however, to the selection of the kinds of weeping trees, for all are not suitable for the same purpose.

As a whole, weeping trees may be divided into three groups, according to habit. One group is made up of trees on which every branch is pendulous, the whole branch system assuming more or less the outline of an open umbrella. Another group is composed of trees with an upright leader and moderately straight main branches with the secondary branchlets pendulous; while the third set consists of trees with a curiously-contorted habit of growth, in which the main shoots bend over almost at right angles, and yet the trees continue to increase in height without any attention on the part of the cultivator. As a rule, in such a case all side branches are long and pendulous.

When shade is the first consideration, the umbrella-shaped tree is the best one to plant, for the branches develop in a uniform manner and shade is provided all round. It is difficult to get some kinds of trees to the desired height without



SPRAY OF A HARDY ESCALLONIA, *E. PHILIPPIANA*, A USEFUL SHRUB FOR SEASIDE GARDENS.

down insect pests; but these will not be troublesome if a nice genial atmosphere be kept up. In due time the little pots will become well filled with roots, and it is desirable to give them a shift before they are actually pot-bound. While very good results are had by shifting directly into the flowering pots, I prefer to give them an intermediate shift.

The Second Potting.—Much the same compost is suitable for this, but it should be used in a rougher state. It is also beneficial to add a 5-inch potful of finely-ground bones to each barrow-load of compost, and a small quantity of dried horse or cow manure. Continue to pot loosely, and always keep the corms half out of the soil. Still sprinkle overhead twice a day, and shade from all direct sunshine. Three-inch and 4-inch pots are suitable for the second potting.

Final Potting.—This must be attended to before the plants get root-bound, or a check will be given that not infrequently causes premature blooming and consequent loss of vigour. For the strongest plants 6-inch pots should be provided, with the 5½-inch size for the moderate ones and the 5-inch for the weak growers. Crock with extreme care, and add some pieces of charcoal and half-inch bones above the crocks. The compost should consist of three parts best fibrous loam, two parts brown fibrous peat, one part sweet leaf-mould, one part coarse sand, a quarter of a part mortar rubbish

to a cold frame, as I find they are much less trouble.

Subsequent Treatment.—After the pots get fairly well filled with roots, gentle feeding must be systematically given. Clear liquid made from cow-manure and soot is excellent, but Ichthemic Guano is even better, used at the rate of a heaped tablespoonful to a gallon of rain-water and given twice a week. Both the above liquids may be given, but on alternate fortnights. After the flowers begin to open, an ordinary airy greenhouse suits them best, as the flowers will not only last longer, but the colours will be much more brilliant than if grown in a higher temperature. During the summer abundance of air must be given, and, indeed, at all times a close, stagnant atmosphere must be avoided. Strong heat at any time is disastrous. The chief enemies to the Cyclamen are green fly and the Begonia mite. Fortunately, good cultivation and an occasional vaporising with XL All will keep these pests at bay; but the Begonia mite is a most insidious foe, it can only be kept down in its early stages by constant fumigation. A good strain of seed should always be procured, as really fine varieties are just as easy to cultivate as the poor weedy things sometimes met with. Personally, I much prefer Sutton's Prize and Sutton's Giant strains.

Preston House, Linlithgow.

C. BLAIR.

aid. If, however, a central branch is staked upright, a new set of branches may be gradually formed. To prevent the branches of this class of tree becoming too dense, it is necessary to thin them out occasionally, while the effect of the tree is increased if the branches are kept free of the ground. Weeping trees of this class must have plenty of room to be seen to advantage, and it is a great mistake to plant them in very small gardens where they can never have a chance of developing properly. In this particular section two of the most vigorous examples are the Weeping Ash (*Fraxinus pendula*) and the Weeping Wych Elm (*Ulmus montana pendula*). The Weeping Holly (*Ilex Aquifolium pendula*), the Weeping Thorn (*Cratægus monogyna pendula*) and the Weeping Beech (*Fagus sylvatica pendula*) are also good. There are others, such as the Weeping Cherry and the Weeping Sophora, but they are less useful for general purposes.

For landscape effect the second group provides the best examples, for in this case the various trees attain a height approaching that of their respective types, while their varied habits are extremely graceful. To this group Young's Weeping Birch (*Betula alba pendula Youngii*), one of the most graceful of all weeping trees, belongs. Scarcely less elegant in outline is the ordinary Weeping Birch, which is frequently found wild in native woodlands, and sometimes comes true from seeds. The various Weeping Willows may also be included in this group, more especially *Salix babylonica*, *S. b. Salomonii*, *S. alba vitellina pendula* and *S. elegantissima*. The weeping kind of *Salix purpurea* forms a comparatively low tree or large bush, and although its wand-like branches are light and graceful, the general outline of the plant is less pleasing than the previously-mentioned kinds. There is also a weeping form of the Goat Willow (*S. caprea*), but it is hardly worth considering when making a selection. A Weeping Ash of this type is noticed in *Fraxinus Excelsior Wentworthii*, and a Beech in *Fagus sylvatica bornyensis*. *Ulmus glabra pendula* and *U. campestris microphylla pendula* are instances of decorative Elms with weeping secondary branches, while one form of *U. montana* has a similar habit. A singularly beautiful conifer with weeping branches is *Picea Morinda*, while *Cupressus nootkatensis pendula* and the various Larches are also of graceful outline.

The third group is typified by a Weeping Beech, which often assumes a commanding appearance. It is known by the varietal name of *miltonensis*. Another tree of similar outline is the weeping form of the White Mulberry (*Morus alba pendula*). In this case it is necessary to stake a leading shoot upright in order to get height into the tree.

It must not be assumed, however, that all weeping-habited trees are an acquisition to the garden, for such is not the case. Some have the appearance of monstrosities, and it would have been a good plan to have burnt them rather than have given them distinctive names and distributed them broadcast. Several pendulous forms of the common Spruce may be obtained, not one of which can be called ornamental. The same may be

said of the Weeping Apple, the Weeping Hemlock Spruce, one or two Weeping Plums and Cherries, although *Prunus pendula*, a good species, is really ornamental. In a few words, a really good weeping tree is a pleasure to look upon and a worthy occupant of the garden, but an inferior example is an eyesore and not worth the ground it stands upon; therefore select only the best kinds, and treat them to a liberal amount of good soil at planting-time in order to get all that is possible out of them. D.

THE FLOWER GARDEN.

SIDALCEA CANDIDA.

A NATIVE of New Mexico, *Sidalcea candida* is a hardy, handsome, herbaceous perennial, growing from 2 feet to 4 feet high and bearing terminal racemes of large pure white flowers. It is a very useful and ornamental plant for the herbaceous border, the wild garden or the shrubbery. At all times it should be planted in large masses; it then makes a very bold and attractive display. Even a bed of it in some secluded spot, providing



SIDALCEA CANDIDA, A USEFUL HARDY PLANT FOR BORDER OR WILD GARDEN.

it is not too shady, produces a very fine effect when in bloom.

Another species worthy of notice is *S. malvæflora*, from North-Western America, with lovely lilac flowers, which are not quite so large as *S. candida*. *S. Listeri*, of garden origin, has pretty pink flowers; this is considered by some authorities as a variety of *S. malvæflora*, but the flowers are not only of a different shade, but are larger and fringed, although that alone is not sufficient to make it a distinct species. They will all succeed in full sun or partial shade in any ordinary garden soil, and are easily propagated by seed or division of the roots, both of which should be carried out in the spring. F. G. P.

SWEET PEA NOTES.

The "National" Show.—It does not come within my province to give a report upon this magnificent gathering, but I feel that some slight reference is permissible in addition to the exhaustive details that have already appeared in the columns of THE GARDEN. In my last notes I deplored the fact that it had been decided to place baize-covered barriers down the middle of each table. I now most whole-heartedly condemn what was done. It was impossible to get a view of the charming general effect from any point of vantage save the gallery, and it is not possible to allow all and sundry to mount there to see the beauty of the show. Standing in the body of the hall or upon the steps of either annexe, one could see a single table and no more; whereas before these ugly boards were utilised one could see the length and breadth of the entire exhibition. The step is a retrograde one, and I hope that it will not be persisted in another season. If it is, I would suggest that each exhibit shall be penned off as is done at dog and poultry shows, since this is the only logical end of the matter. The object was to prevent the bunches on one side of the table clashing with and minimising the effect of those on the other side. But the serious clashing occurs when the bunches are side by side,

and the divisions ought, therefore, to come between them!

The Disqualifications.—I feared that double standards would prove to be somewhat of a curse to the judges, and such proved to be the case; but I was immensely relieved to find that my fear that Mr. Curtis would be promptly removed from this vale of tears was unfounded. When I reached the hall the secretary was alive and well, but suffering from an attack of depression which naturally followed the trouble into which he had been inadvertently driven. I had been judging Sweet Peas, equally as fine as the majority of those at the "National," at Wolverhampton with Mr. Fife of Dobbie's, and we were exceedingly careful

never to mention the words "double standards"—we had plenty of hard work to do without bothering about them. Many people will, perhaps, consider that the decision to disqualify any exhibit in which stems with double standard flowers are present is correct; but, personally, I am not of that opinion, and trust that the rule will have been rescinded before the next show comes along.

The Judges' Decisions.—In further relation to the rule that double standards should disqualify, I was greatly interested in the decisions arrived at by some of the judges. Going round the show, I found that in several instances the judges had decided that, as all the exhibits in a particular class contained flowers with double standards, they would judge the flowers on their merits. I maintain that they had no power to do anything of the sort. The exhibits contravened the rules of the society as printed and published, and

in this particular question, but it is impossible for me to overlook and fail to protest against the creation of a precedent which would, if persisted in, give the judges power to alter any rule in any schedule that might not meet with their personal approbation. The position is an impossible one.

HORACE J. WRIGHT.

FLOWERS IN AN OLD-FASHIONED GARDEN.

AMONG the many gardens scattered so freely throughout the Southern Counties of England, none are more pleasing than those attached to old-fashioned country houses, providing they have been allowed to retain their original features of simplicity and colour. Unfortunately, in many instances the owners or tenants of such houses are incapable of appreciating the quaint charms of such gardens, and instead of finding Box-edged

by Mrs. Sheaf, a lady who has for some years taken a very keen interest in the garden, and who has done much to retain its old-world character. On the June day when we were fortunate enough to visit this garden the air was filled with the scent of Madonna Lilies, Honeysuckle, Stocks and Box edging, all the paths having a bountiful margin of this old-fashioned shrub. The accompanying illustrations will give some idea of the character of the garden. The weathered red-brick retaining wall, with its venturesome Ivy, Sedums and other plants, seen in the first illustration, skirts the lawn, and the border above, as well as the one below, is filled, quite informally, with Roses, Madonna Lilies, Phloxes, Evening Primroses, Pinks, Japanese Windflowers, Stocks and similar plants. The second illustration represents a border lower down the garden, going towards the river that girts it at the bottom, filled with Chrysanthemum maximum, Cornflowers and Poppies, a simple yet beautiful combination that is quite in keeping with the surroundings. In the distance, and not visible in the illustration, are some ancient Filbert trees, planted doubtless by some village squire, and at the time of our visit these relics of bygone days were carrying the heaviest crop of Nuts we have ever seen. The peaceful aspect presented by the whole garden provides a delightful retreat from the bustle of modern life, and it will be a bad day for our country when such old-world gardens as this cease to exist.

WORK AMONG THE CHRYSANTHEMUMS.

THE work among the plants during this month is about the most important and interesting of any done throughout the season. It is important, because the majority of the precious buds must be secured, and interesting on account of the fact that the buds are the ones to develop into the magnificent blooms that cultivators strive to produce from December to the following November. Of course, experienced cultivators know all about bud "taking," but the beginner does not and is wishful to learn, so the following hints will be helpful to all such.

About Buds.—There are first-crown buds. These generally appear very early in August, and continue to do so, according to the variety, until the end of the month where the incurved section is included. The second-crown buds are those resulting from the due stopping of the plants in March and April in the first instance, and they mostly appear about the middle of August, and continue to do so until September 5 or thereabout. The terminal buds are those which appear later than any others, and the fully-developed flowers from such are generally only fit for exhibition in the case of a few varieties of the incurved section, but many of the single-flowered are good from such buds.

The Right Buds to Take.—"Taking" really means retaining. It is a term generally used among the cultivators of this plant, but "securing" or "retaining" would, either of them, be better words to use. However, the word "take" means

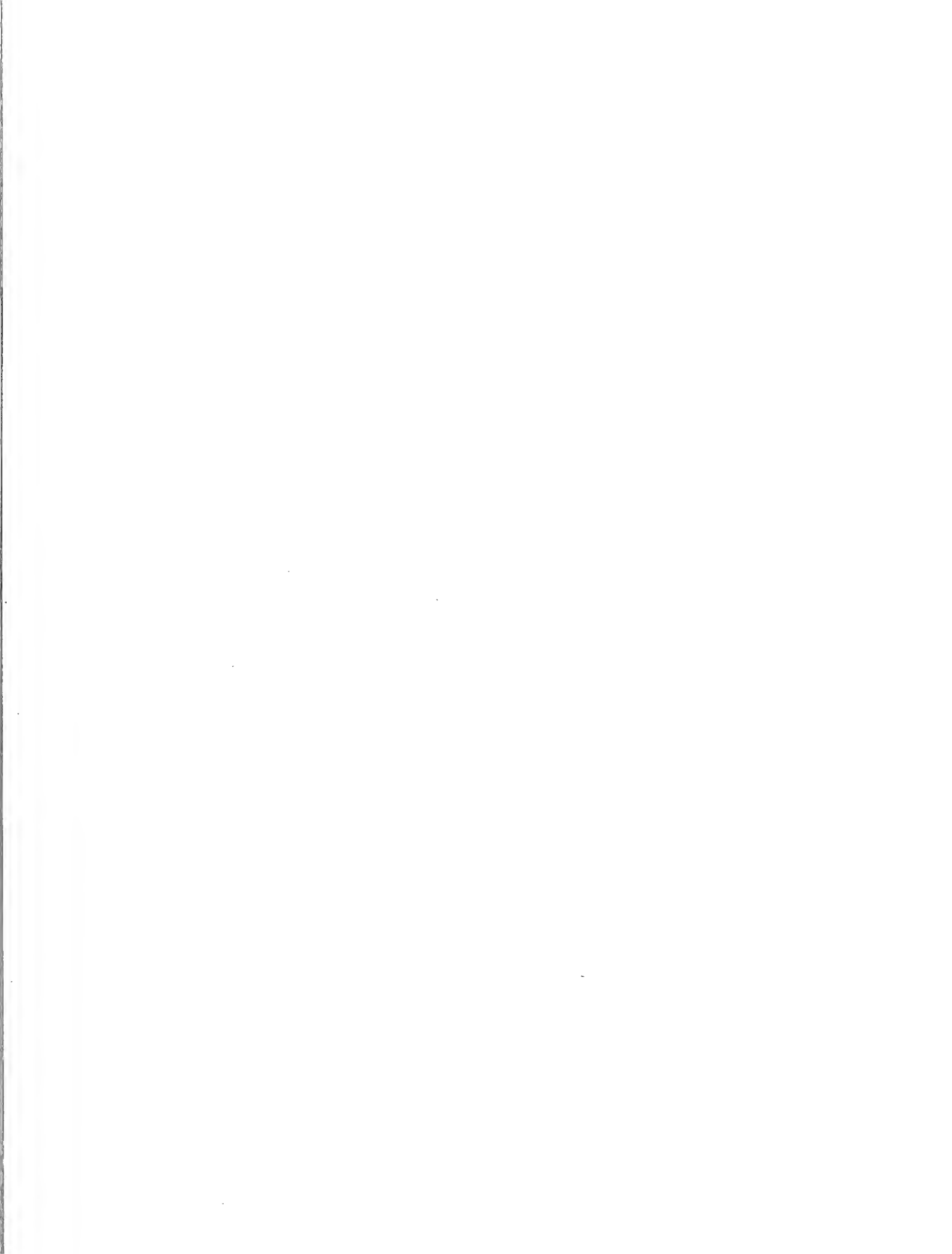


BRICK RETAINING WALL AND FLOWER-FILLED BORDERS IN AN OLD-FASHIONED GARDEN.

therefore they should have been instantly disqualified. I have been judging flowers, fruits and vegetables in all parts of the country for many years, and have always thought that the rules which governed the exhibitors also governed the judges. If this view is not correct, where on earth should we come to? To permit a judge or set of judges to alter the published rules is ridiculous, and would lead inevitably to endless confusion and dissatisfaction. And rightly so. Any prizes that were awarded at the "National" under the decision mentioned were illegal. Had the judges disqualified all the exhibits in a class, and then judged the flowers on their merits with a view to awarding special prizes, all would have been correct, provided, of course, that the committee had sanctioned it; but completely to ignore a rule was wrong, from whatever point of view one may regard it. I wish it to be clearly understood that all my sympathies are with the exhibitors

borders filled with flowers suitable for their surroundings, one too often encounters gaudy, formal patches of such kinds as bedding Geraniums and Calceolarias, excellent plants in their proper places, but totally unfitted for old-world surroundings. Thus, when we do find an old garden the owner of which has correctly hit the keynote of simplicity of arrangement and colour, it is all the more pleasing, and worthy of placing on record.

One such is the garden whence the illustrations (pages 390 and 391) were taken. This and the delightful old house known as The Park are situated at Stebbing, a typical Essex village some three miles north of the quaint little town of Dunmow, and skirting the Roman road that runs from Ware in Hertfordshire to Colchester in Essex. The history of the house does not now concern us, but that it occupies the site of a very ancient residence, the moat, with its surrounding moat that adjoins the garden, testifies. At present it is occupied





THE NEW
HOODED GLADIOLI
(Hybrids of *G. Primulinus*).

to retain a certain bud, and to remove all others or shoots surrounding them. In the case of all late varieties, such, for instance, as the Hon. Mrs. Lopes or Mrs. Gilbert Drabble, first-crown buds must be taken. If such buds appear very late in July, retain them, removing the side shoots near them one by one until all are removed. The work of "taking" may be spread over ten days. It is better to do this than to remove all unwanted buds or side shoots in one day; then the bud retained will receive no check, but continue to grow steadily and sturdily, and this is what we want. If the buds of very late-flowering varieties are taken about August 7, the resultant flowers will be practically perfect. Medium early varieties will show their buds from August 10 to August 25. If taken any time between those dates, the resultant flowers should develop just right. Very early-flowering varieties and the majority of the incurved section, as well as the single-flowered, should show their buds during the last week in August and the first week in September.

How to "Take" the Buds.—

The cultivator must watch the points of the shoots carefully every day and every evening, so as to destroy earwigs found there and to be ready to pinch out the young side shoots when the latter are about half an inch long, or just long enough to be quite free from the flower-bud. The latter must not be damaged in any way by the removal of the side shoots, and, as previously stated, the pinching out of these small shoots must be done gradually, one or two each day, until only the bud is left, the main stem and the main leaves on it. During the time the buds are being taken the plants should only receive clear water or occasional doses of very weak liquid manure. Directly the buds begin to swell freely, feeding may be resumed and a good top-dressing of rich compost put on.

AVON.

COLOURED PLATE.

PLATE 1452.

THE HOODED GLADIOLI.

THE coloured plate presented with this issue represents hybrid flowers of a particularly interesting character, viz., *Gladiolus primulinus*

crossed with varieties of *G. gandavensis* and *G. Childsii*. The hybridising of *Gladiolus primulinus* with other forms was taken in hand in this country and in America shortly after the species came into cultivation. It proved very productive as a parent, and, crossed with forms of *gandavensis* and *Childsii*, has produced a race midway in size and stature between the two parents, and the yellow colour of the type crossed with the stronger reds and pinks of the *gandavensis* has produced a number of intermediate soft shades of rosy apricot, pink, salmon and similar colours,

which are making the most delightful combinations. The hooded nature of *primulinus* is reproduced in varying degrees in the hybrids, which makes them most fascinating, both as plants in the border and especially for table decoration. They are all of easy culture, and Messrs. R. Wallace and Co., Kilnfield Gardens, Colchester, who kindly supplied the flowers from which the coloured plate was prepared, inform us that they have found them do well planted by the side of water, and also mention that evidently the liking for such conditions comes from the fact that *primulinus* is found growing in wet situations. The point



A SIMPLE BORDER OF CHRYSANTHEMUMS, CORNFLOWERS AND POPPIES.

worthy of notice is the fact that the majority of seedlings are all good and worth keeping, whereas in a general way seedlings of *gandavensis* do not produce all first-class flowers. Dr. Van Fleet, a well-known American authority on *Gladiolus*, has been working with these hybrids for some years, and has evolved a race which is superior in many respects to those previously introduced. *Gladiolus primulinus* is a native of Central and South Africa, the peculiar hood of the flower is said to be some protection against excessive moisture in the atmosphere.

THE ROCK AND WATER GARDEN.

YELLOW-FLOWERING CAMPANULAS.

THE colour of the Campanulas is generally more or less bluish lilac or white. The yellow-flowering ones are rare. In the chalk mountains of Central and South Europe one finds the Monocarpian (not bi-annual, as it is often said) *C. thyrsoidea*, which bears in May and June a dense thyrse of greenish yellow flowers, very fragrant. This is in common rock gardens; but two other species are seldom seen, which are yellow-flowering, too—I mean *C. petraea* and *C. velutina*. The first I found once in the neighbourhood of Puget-Thénic in the South of France. I had it many years ago in a wall, but could only once see its flowers. So I wished to see it in the wild state to note how it grows and to know how it must be raised. The plant was given as growing in the Escales d'Aiglun, in a very disagreeable slope of stones, where the sun shines with the deepest intensity. So we started at once, one of my sons, who was then living at Puget-Thénic, and I, in his lightest carriage, for the Escales d'Aiglun. But judge of my joy when I saw, just at the summit of the pass leading to the Valley d'Aiglun, in perpendicular and titanic walls close to the road, near a tunnel called Passe de Biolan, my yellow Campanula growing like weeds! It was not in flower, but no doubt that was it. It grew there in half-shady places in the leaf-mould accumulated by the centuries, in the crevices of the steep rocks, and was very flourishing. That plant has small yellow flowers, densely close together in short spikes, which flowers from August to October, and seldom ripens its seeds with us. Last year, of course, we got good and abundant seeds of it! The third yellow-flowering Campanula I have to speak of is *C. velutina* (*lanata*), which grows in the Balkans and in Asia Minor, and is often identified with *C. lanata*. Velenowsky, in his *Flora of Bulgaria* (page 365), does not hesitate to separate the two kinds, saying that while *lanata* is a bi-annual and has five stigmata

with a five-celled capsule, *C. velutina* is perennial, with three stigmata and a three-celled capsule. Then, in *lanata* the corolla is blue, but in *velutina* it is yellow. *C. velutina* grows very easily here in the crevices of my wall, in a sunny position, and sows itself between the rocks. It flowers in summer (July to October) in a pyramidal branch of yellow, rather big flowers, exceedingly picturesque to see. *Campanula mollis* of Spain, which is very near to the last, I do not know, and is, I fear, very rare in gardens.

Floraire, near Geneva.

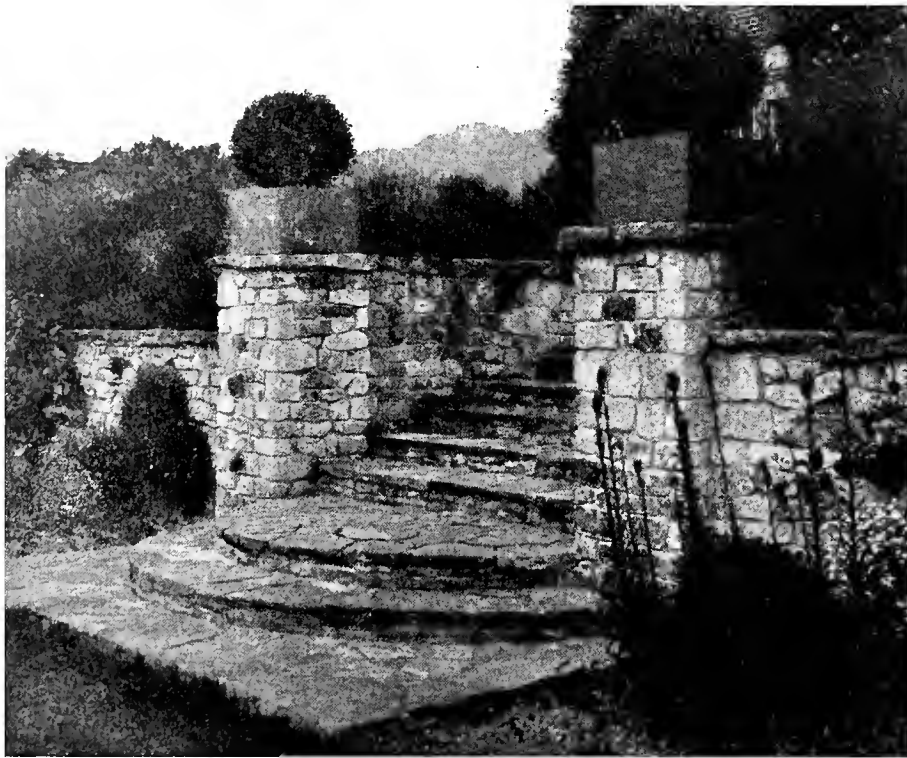
H. CORREVON.

THE PAVED GARDEN.

HERE is at present a growing feeling among gardeners that the reaction against formality in gardening has reached its limit, and that it is time the pendulum began to swing back in the opposite direction. People are beginning to realise that gardening comprises something more than a servile imitation of Nature; that the artistic criterion of a garden is something higher than its naturalness. The mistake, which is still too often made, is the failure to realise the architectural character of such garden appendages as pergolas, trellises, arbours and summer-houses. With a growing appreciation of the fact that such things demand as careful planning as the dwelling-house itself there is arising a class of specialists whom one may

the undisturbed restfulness of long years, which should be an attribute of the paved garden.

If any plants at all be admitted upon the actual paving, the very greatest care should be exercised in their selection and insertion. It cannot too often be insisted upon that paving is primarily intended for the feet of man, and any plants allowed to grow upon the space devoted to that purpose must not only wear the semblance of having made a bold bid for freedom and escaped thither from the neighbouring borders, but they must in themselves be strictly in harmony with their surroundings. The indiscriminate planting of a variety of rock plants is most strongly to be condemned. To an artistic mind the result of such planting is as repellent as would be the appearance of casual foot-paths across one's choicest Rose-beds. As Rose-beds are intended for Roses, so are walks intended for walking upon, a proposition so elementary that its habitual neglect is little short of astounding.



A STONE GARDEN STAIRWAY OF BOLD DESIGN.

designate "garden architects." The particular branch of gardening to which we desire now to draw attention falls within the peculiar province of such garden architects, and a paved garden designed by one of that fraternity will be far less likely than would otherwise be the case to display such glaring and rudimentary errors as, for example, the use of so-called "rustic" work in conjunction with paved walks or courts. For one of the cardinal principles to be observed in the design and construction of the paved garden—be it merely a paved walk with or without a pergola, a paved Rose or water garden, or a paved forecourt—is that the only traces of rusticity allowable in such a garden are those due to art and not to accident. It is, for example, not merely permissible but desirable to encourage the mossing over of stone edgings and the interstices of paving, for thereby is obtained that venerable appearance betokening

A cardinal rule to be observed in planting crevices is that all traces of the gardener's hand must be studiously obliterated; accordingly, the most successful results are obtained where the paving is flanked by low retaining walls built of unmortared stones, the chinks between which are filled with suitable alpinas, so that any plants allowed to grow upon the paving appear to be favoured intruders in forbidden regions. Where no such retaining wall is present, it is advisable to have a stone edging covered here and there with the most prostrate plants, some of which may be permitted to trespass a short distance upon the walk. The varieties of *Phlox subulata* are peculiarly charming when grown in this way. Again, where the paths or walks are flanked by beds, in which the front portions are occupied by the lower-growing *Campanulas*, *Saxifrages*, or *Sedums*, a stray plant or two of the same variety may be allowed to wander

on to the adjoining pathway. But under no circumstances should these dainty rogues encroach beyond the outer edges of the paved walk. If the latter become so much overgrown that one has to pick one's way between tufts and clumps of plants which one would be loth to injure, then the bounds of moderation have been exceeded.

A solution of the difficulty is to be found in the use of exceedingly dwarf species only, such as the *Veronicas canescens* and *rupestris*, *Arenaria balearica*, *Herniaria glabra*, *Mentha Requienii*, *Thymus Serpyllum albus* and *coccineus*, and possibly also the *Acanas*, such as *inermis* or *pulchella*, or, best of all, *Buchanani*. None of these will resent an occasional trampling. Subject to the restrictions already stated, such dainty small flowers as *Asperula Gussonii* and *hirta*, *Campanula pusilla*, especially the variety named after Miss Willmott, and *pulla*, *Stansfieldii* and *waldsteiniana*; *Erinus alpinus*, *carmineus* and *albus*; *Hutchinsia alpina*, *Saxifraga muscoides atropurpureum* and *Rhei*, *Silene acaulis*, *Sedum farinosum*, *Semprevivum arachnoideum*, and such plants as the dwarf *Dianthus*, may be allowed upon the outer portions of the paving.

One of the most charming and effective uses of paving is in the Rose garden; but here, great though the temptation may be, the walks should be left free of vegetation, with the exception of moss. One word of warning should be given concerning the size of the stones employed. These should never be less than one foot square, but should preferably be considerably larger. For walks those of rectangular shape are most suitable. For a paved enclosed court, such as the little Tudor garden at Hampton Court Palace, stones of irregular sizes and shapes may be used. An admirable example of a large paved garden associated with tub plants and Lily tanks is to be seen in Kensington Gardens, near Lancaster Gate. Such a garden forms a most appropriate connecting link between the precincts of the house and those of the garden proper. Many alpinas will be found to seed freely between the joints of the paving; where there is ample space, a charming effect is produced by a few clumps of seedlings of plants such as *Campanula portenschlagiana*, *garganica* and *G. F. Wilson*; *Cheiranthus Allionii*, *Dianthus deltoideus roseus*, *Erinus alpinus*, *Linaria alpina* and *Papaver alpinum*. But even here the keynote of success is moderation.

RAYMOND E. NEGUS.

NOTES ON GARDEN DESIGN.

MANY a garden loses in attractiveness by the careless treatment of the short stairways which lead from one level to another. It is not always realised how much additional charm is given by the well-conceived design of such details, or how great a variety lies open to the straying choice. Steps need to be considered in relation to the retaining walls, in which they often make a break. They should have wide treads and narrow "risers" so that they are easy-going. Too great a regularity in their building is to be avoided. Rough rubble masonry is generally to be preferred to ashlar, where stone and not brick is the material, but the rustic character should not be overdone. Great variety is to be attained by a happy conjunction of straight with curved steps, as in the accompanying illustration, which shows also the value of rough piers to mark the break in the retaining wall. The example is chosen from Island, Steep, Petersfield, where is also the paved Rose parterre which was pictured in THE GARDEN last week. L. W.

GARDENING FOR BEGINNERS.

PROPAGATING BEDDING PLANTS.

THIS is very interesting work, and one in which amateurs take a great delight. Even the most experienced cultivators suffer some losses in the rooting of cuttings and in very favourable circumstances, so that the beginner must not be disheartened if he loses a few of the precious cuttings. When cuttings are taken in the spring, rather soft wood must be selected; but in the autumn young wood, well firmed, is the best, as very soft, sappy stems would be liable to decay either when first inserted in the soil or when the first dampness of the winter season came. Another guide for the benefit of the inexperienced may be given, namely, that the stems of cuttings which are to be rooted under quite cool conditions must be harder or firmer than those subjected to a gentle heat, especially a bottom-heat such as is provided by hot-beds or hot-water pipes under a propagating-frame.

Composts for Cuttings.—Two heaps of composts should be mixed, one being made up of fibrous loam and leaf-soil in equal proportions, with sufficient coarse sand added to render it very gritty in nature. Such a compost is grand for Zonal Pelargoniums, Petunias, Calceolarias, Gazanias and Marguerites. Another heap must be made up of fibrous loam, one part; leaf-soil, two parts; and sand, one part. In this case the compost will be suitable for Heliotropes, Iresines, Coleuses, Lantanas, Alternantheras, Mesembryanthemums, Ageratums and Fuchsias. As a general rule, at least three large leaves must be left on each cutting besides the small ones at the extreme point, after being duly prepared for insertion. All cuttings must have a heel to them—that is, a very small portion of the older wood attached—or be cut off just below a joint. The reason for this is that a callus forms more quickly and more surely than when the stem is severed between the joints, and consequently there are fewer losses. Cuttings may be inserted in pots, shallow pans, or in boxes about



1.—SECTIONS OF PREPARED POTS, WITH CUTTINGS IN COURSE OF PREPARATION.

four inches deep. Good drainage is essential. Some sand must be laid on the surface of the soil, as it prevents decay, and some sand must be borne down by the cutting-stick for the base of the cutting to rest on, as it conduces to the formation of roots.

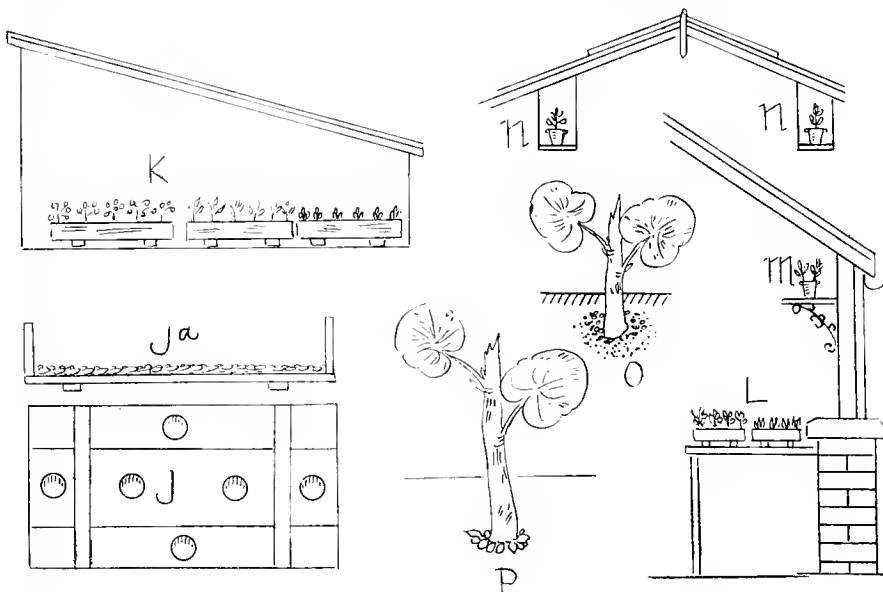
The Best Time to Take Cuttings.—Zonal Pelargoniums, Fuchsias, Gazanias, Heliotropes, Ageratums and Lantanas should be propagated early in August; Mesembryanthemums and plants of a succulent nature generally during the latter part of this month; and other kinds of soft-wooded plants not of a true succulent nature during the early part of September. In their case a slight bottom-heat is advisable. Calceolarias are best

rooted in cold frames. Insert the cuttings at the end of September.

The Sketches Explained.—Fig. 1: The stem of a cutting as shown at A must be severed with a sharp knife just below a joint, and the lower leaf or leaves as shown at B. In the case of most kinds of cuttings, the lower leaves are best cut off; in that of Zonal Pelargoniums they are best when pulled off, and also all scales, as the latter often decay in the soil and cause the loss of the whole cutting. C shows how the crocking of a pot must be done; D, crocks; E, soil in the pot; F, sand on the surface. G shows the right kind of Heliotrope and a similar plant cutting—a basal shoot; H, the cutting prepared for insertion; I, stick to make the holes with. All flowers on cuttings must be removed. Fig. 2: J shows bottom of cutting-box, with holes and strips of wood to keep box off soil; Ja shows section of box prepared for the compost; K, cuttings in boxes in a frame; L, boxes on stage in a greenhouse; M, pots on side shelves; N N, pots on suspended shelves in a span-roofed house; O, sand round the base of a cutting; P, the callus formed prior to growth of roots. Water all cuttings when first inserted, then only when water is actually required. G. G.

HYDRANGEAS FROM CUTTINGS.

The common Hydrangea is justly admired for its large, showy heads of blossoms, and at this period, when many of them are at their best, one's thoughts naturally turn to their propagation. What is more, this is just the time to increase them by means of cuttings, which are not at all difficult to root, and the plants so obtained will, in many cases at least, flower next year. The best cuttings are furnished by the strongest unflowered shoots, such, in fact, as could be depended on to bloom next season if left on the plant. A length of 4 inches to 5 inches is very suitable for the cuttings, which should be cut off with a sharp knife just below a joint and have the bottom pair of leaves removed. H. P.



2.—HOW TO TREAT THE CUTTINGS AFTER PLANTING.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Dahlias.—Give copious supplies of moisture at the roots. Earwigs are, especially in some localities, most troublesome, and should be trapped. The best method I know is to cut up some Broad Bean haulm, after it has been well ripened, into lengths of about six inches and tie these on to the stake, leaving a long piece of raffia so that the stem can be lodged in the foliage. Blow them out each morning into a bottle of water. Flowers intended for exhibition must be disbudded and sheltered from scorching sun and rains.

Anemones.—These are among the most gorgeous of our border plants, and continue to flower over a long period. Though some gardens and soils suit them better than others, a trial may well be afforded, especially of the St. Bridgid strain, which contain in the mixed varieties, literally speaking, all the colours of the rainbow. Select a piece of ground that is partially shaded, such as a strip in front of a trellis for hardy fruit, and draw a drill. Mix the seed with silver sand and sow thinly and evenly. Make the bed firm.

The Rock Garden.

Dianthus.—The various species on the rock garden may be increased by cuttings after the flowering period is over and as soon as the growths attain sufficient size. Hand-lights under a north wall or other shady position, and with a depth of 3 inches of sandy soil passed through a fine sieve, will suit the purpose. If the cuttings receive a good watering after insertion, occasional dampings overhead according to the weather will suffice until rooted. *Dianthus Napoleon III.* is a magnificent variety. The rich scarlet double flowers are freely produced, and have shown to great advantage near to a clump of *Thymus Serpyllum albus*.

Seed-pods.—Unless these are wanted to ripen for seed-sowing at a later date, they should be removed immediately the flowers are past, as, with the choicer plants especially, much of their vitality is absorbed, and the plants also present a much neater appearance.

Plants Under Glass.

Oleanders.—Where space permits for these to make bushy specimens, they rank among our most handsome greenhouse shrubs, and are at the time of writing making a grand display. There are several varietal hybrids of varying shades of colour. A plentiful supply of water will be needed when the plants become pot-bound, and liquid manure should be also afforded. When the flowers are past, the growths should be shortened back.

Winter-flowering Begonias.—Pot on the plants as becomes necessary, and attend to the staking and tying. Keep the surroundings moist to encourage a clean growth, and shade from bright sun. Plants of the *Gloire de Lorraine* type especially should have the flower-buds pinched out as soon as large enough.

Freesias.—Where the corms were saved from last year, they may now be shaken out of the old soil and graded according to their size ready for potting up shortly. No delay in sending the order early for these and the earliest-forced bulbs should be allowed, so that potting or boxing may be proceeded with and the receptacles may become well filled with roots.

The Hardy Fruit Garden.

Protection of Fruit.—At the time of writing many nests of wasps have been already destroyed. Choice fruits of Apples and Pears that are specially wanted without blemish should be protected with muslin bags. Where possible, much harm may be averted by covering the fruits with hexagonal netting, as we find that the birds commence by pecking the fruits and the wasps follow their mischief. Various traps should be hung near to the fruit, and bottles half filled with almost any kind of syrup will account for many, but to carefully hunt for nests and destroy them is the best means of eradication.

Early Apples.—Many of the early Apples may have their season increased by picking the most forward fruits carefully and placing them in boxes on a layer of wood-wool, storing in a warm cupboard and examining at intervals; or, better still,

they may be put on the hot-water pipes in a fairly dry house. As soon as sufficiently ripe, a dish may be selected in advance of those out of doors. This will detract but little from their flavour.

The Kitchen Garden.

Lettuce.—Make a good sowing now of Lettuce in drills in a sheltered part of the garden for late autumn and early winter supplies. A successional sowing or two made during the month will probably be found extremely useful for maintaining the supply. When the plants are large enough for thinning, the young ones that are removed may be transferred to positions where they will be less likely to suffer from early frosts.

Early Crops of Potatoes as soon as ready should be lifted, as nothing is gained by allowing them to remain in the ground, and, as I think I have already mentioned, no harm will result if the skins of the tubers do rub a little.

Seakale.—Keep this crop free from weeds by the frequent use of the hoe, and thin out the weak growths, also remove any flowering stems.

Brussels Sprouts.—Where time permits, the plants of these will benefit by having stout stakes placed to them, and any of the lower leaves that are decayed should be removed.

Fruits Under Glass.

Late Grapes.—Encourage the crop to swell freely by the application of stimulants to the borders. Look over the bunches carefully, and, if the berries are too crowded, cut out one or two where necessary, taking great care not to stab any of the others with the scissors. Ventilation must be carefully attended to. On hot days it is almost impossible to give too much air, and frequent dampings, leaving a good circulation on at night, will dispel condensed moisture and avoid much splitting of the berries. In the week ending July 20 we had a sudden change, when much less ventilation was needed and a slight circulation of heat in the pipes during the day as well as at night was welcomed.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Spiræa Ulmaria.—This is one of the few handsome plants from which it would be a mistake to remove the old flower-spikes. After flowering they remain a nice brown colour for the remainder of the season, and are by no means only slightly decorative.

Climbing Roses.—Quite a number of these, e.g., *Dorothy Perkins* and its varieties, *Hiawatha*, *Crimson Rambler* and others, produce shoots from the base of the flower-trusses, which should all be removed. When left, they partially hide the bloom and are otherwise of no value. Continue to tie in the current year's shoots, which still are growing rapidly. *Banksian* Roses should have the growths secured by string and nail to walls.

Supporting Plants.—*Galtonias* are the better for a short stick to each, which steadies the spikes. Otherwise they are apt to straggle over in every direction. *Montbretia rosea* also needs partially supporting, several spikes being tied to one short and light stake. As a rule, other sorts need no support. Single-stemmed *Asters* sometimes require steadying, but as a rule I find these and many other plants which are usually staked stand well without supports.

Hedges.—Complete the trimming of all kinds of evergreen hedges as soon as possible. This work takes a lot of time where extensive, but by choosing weather when ground work is impossible the time is not so greatly regretted. Trees in the form of peacocks, pillars, cones, etc., should also be trimmed now, which leaves them neat till next year. In formal gardens, Box or other edgings should also be clipped, obvious irregularities being eyesores where these are concerned. Note, however, that variegated shrubs, Yews in particular, should be only very slightly trimmed at this time of year, else the variegation may be impaired for many months.

The Bog Garden.

Iris lævigata.—This is now the cynosure of this spot. I do not find it to succeed in the garden;

not that the plants do not grow, but in most years they fail to flower. When constantly wet during summer, they flower consistently. The blooms, if cut before expansion, are splendidly decorative.

Ferns.—*Osmunda regalis* succeeds well in the bog, and on its edge *Adiantum pedatum*, along with the *Cystopteris*, and *Asplenium Lonchitis*, usually difficult to grow, succeeds also a little raised above the water-line, and with these Bamboos associate and thrive.

Lilium pardalinum.—This fine Lily does not always succeed in light soils, but in the bog on a mound of clayey loam it grows with amazing vigour. Its season of flowering is again at hand, the long stems needing some slight means of support to preserve them in an upright position.

Indoor Fruits.

Wasps.—I never recollect so many hanging nests of wasps as have been found and destroyed this year. The assumption is that, being early at work nest-building, we shall have the fruit-eating brood also early. Nothing beats hexagonal netting nailed over the ventilators—the top ones only if the bottom ones are kept closed—as a preventive against wasps for all indoor crops. In very hot weather the glass should be shaded to keep the temperature from getting too high owing to the lessened ventilation.

Split Berries.—A few varieties of Grapes are apt to have more or less of the berries split at this season. Whenever a few are seen to be split, in however slight a manner, the shoot bearing the cluster should be notched halfway through an inch or 2 inches below the junction. Muscat berries sometimes drop, seemingly without any cause; but on a close examination this proceeds from the skin cracking quite close to the place of junction of the berry with the petiole. Try the like means as a precaution.

Frame Melons.—These ripen well during the next six weeks by giving attention to ventilation so that the temperature in the daytime is high, and by means of coverings kept from falling low during the night. Expose the ripening fruits by raising them close to the glass. The fruits keep in good condition for a long time if preserved in a cool room.

The Plant-Houses.

Cinerarias.—These should be advanced enough to transfer from boxes to 4-inch pots. They grow rapidly in a rough compost made moderately firm, and after a few days' protection from the weather should be exposed night and day. Coolness is very important, and a platform of hard coal cinders, always kept moist, suits them well and is a certain means of preventing the attack of green fly.

Begonia Gloire de Lorraine.—The most forward of these are now ready to be staked out, using for the purpose extremely thin sliced Bamboo.

Begonia Gloire de Sceaux.—This is almost as useful as the last-named, and the plants may now be finally shifted into their flowering pots. It depends on the size of the material wanted what pots should be used. Very nice plants can be produced in 7-inch pots, and they can be shifted from small pots to large ones successfully. Rough rotted turf and dried cow-manure rubbed through a fine sieve suits them well. It is essential to have the foliage large and well-coloured, and only by keeping the plants growing freely and without the slightest check can this be attained.

The Vegetable Garden.

Spinach.—Where this vegetable is in request during winter, a large breadth should be sown in the course of a few days, choosing one of the broad-leaved varieties, which give much the best results. It usually succeeds some earlier crop, and the ground, as a rule, needs to be merely loosened with a fork to make it ready. In dry weather soak the drills with water previous to sowing the seeds, and use comparatively very few of these.

Celery.—A sufficient quantity for autumn use may be completely earthed up at any suitable opportunity. It is best done shortly subsequent to a heavy rainfall, or else in dry weather the day after artificially flooding the trenches. The stalks must be tied previous to applying soil, and instead of fastening the ligatures with a double knot, one is sufficient, provided it is turned twice instead of once.

R. P. BROTHIERSTON.

Tyninghame, Prestonkirk, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ALOES (D. H. P. Dennis).—We presume that by Aloes you mean *Agave americana*, which is often called the American Aloe. If that is so, it is unlikely that you will be able to keep the plants out of doors throughout the winter without running the risk of having them seriously injured or killed outright. In the event of severe frost occurring, you could erect a covering of mats around them, and so give them some protection; but, except in the extreme South-West of the country, we advise placing such plants under cover for the winter months. You may rebud them at once. Take good, coarse, fibrous loam, three parts, and mix with it one part of pieces of sandstone and mortar rubble. You may also add a fair quantity of half-inch bones. Drain the new tubs well, and make the new soil very firm about the old balls.

SPARAXIS, HABRANTHUS AND LITHOSPERMUM (Collapit, Devon).—The Sparaxis might be safely transplanted early in September. The plant dislikes much lime, and luxuriates in moist and very sandy soils or a mixture of loam, peat, leaf-soil and sand in equal parts. A good depth of this and full moisture during growth should be assured. Bury the roots 4 inches or so below ground-level. In the case of severe frost, the bed should be mulched with light manure. The Habranthus prefers a bed of very sandy loam, well drained and about eighteen inches in depth. Lift and replant a few weeks after the bulbs have fully matured and the leafage has died down. Replant 5 inches deep. The Lithospermum are best propagated from cuttings inserted during August and September in a hand-light or frame placed in a rather shady spot. The soil should be made very sandy. The best cuttings are non-flowering shoots an inch or more long. These are best secured by cutting back the old flowering stems—these stems are practically useless for propagating—and with new growths appearing of the size indicated, strip them off with a heel attached and insert without more ado. With care in watering, the majority of such cuttings root quite well.

MADONNA LILIES AND WIREWORM (Mrs. M. M. G.).—There are several so-called soil fumigants that are supposed to kill this pest, though opinions vary considerably as to the fact, and our own experiences of some of them are not of a convincing nature. We know full well the trouble this pest is to growers of Lilies, Gladioli and other things; hence a perfect and always reliable remedy that would not inflict injury upon plant-life nor have a paralyzing effect upon the soil would be a boon to all. The old remedy of gas-lime is still good where large areas have to be treated, though in the garden we think you cannot do better than try Apertite, now being advertised in our columns. A difficulty in your case would be that you could only treat the soil near where you desire to plant, and even though the pest be eradicated from that small area, it might be attracted to its food from other parts. The wireworm at this time of year works very near the surface, and light forking and hand-picking would get rid of many. You might also endeavour to attract them by means of Carrot or Potato traps sunk in the soil, arranging a few 1 foot or more from the groups of Lilies, and examining them from time to time. In the same way other parts of the border may be treated. The soil treated with fumigant would be ready for planting about ten days after the application. As your Lilies are in pots, there is no immediate hurry for planting them.

THE GREENHOUSE.

BEGONIA MITE (W. A.).—Your Begonias are badly attacked by the Begonia mite, to destroy which you must dip the plants in one of the many nicotine preparations, or vaporise with the XL All Vaporiser. In either case one application will not be sufficient, as two or three at intervals of a few days or a week will be required in order to make matters safe.

HELIOTROPE (W. S. S.).—Cuttings may be rooted in August and September, and the young plants kept in store pots for the winter, potted separately in February, and grown on to plant out of doors in June or to flower in the greenhouse. For the latter work, batches are brought

on to flower at intervals. This can be accomplished by rooting cuttings at various times and by attention to stopping. To our mind, Sweet Peas look best when each kind is kept distinct, although that is purely a matter of individual taste, some people preferring them mixed. In either case they are very pretty. Seeds of *Salpiglossis grandiflora* should be sown out of doors towards the end of March to bloom in July, or the seed may be sown indoors in boxes and the seedlings transferred to the open in May. A sunny position and good loamy soil with plenty of water are essentials to success. The plants ought to be at least 9 inches apart each way.

PRIMULA SIEBOLDII (E. P.).—This Primula is best treated as a pot plant, although good results are achieved when grown in beds or masses in the open ground, but partial shade is necessary. There appears to be nothing wrong with your plants. They usually commence to grow in the spring, and about April produce a good crop of flower-spikes, after which the plants gradually die down for a month or two. Occasionally a second lot of leaves and spikes appear, but not in such profusion as earlier in the year, when the plants go to rest for the winter months. Repotting takes place about February, and when root action is well advanced they need plenty of water till the foliage shows signs of decay, but even then the base must not be allowed to become dust dry. The creeping roots, or "stolons," may be taken off and potted up if it is desired to increase the stock. If your plants do not produce any flower-scapes, the cause is probably due to watering, or they may not be quite strong enough.

TREES AND SHRUBS.

MYRTLE (M. M.).—From the appearance of the Myrtle shoots sent for examination, we imagine that the plant either is, or has been, short of water. Although you may have given the plant, as you thought, plenty of water, it may have run round instead of soaking into the soil, a condition which often occurs when plants have been placed in borders after having been for a long period in pots. You cannot do better than uncover a portion of the old ball and examine it carefully. If it appears to be dry in the centre, place a rim of clay round the margin of the ball, and keep the basin formed filled with water until the soil is thoroughly soaked. Retain the basin for a few months for watering purposes. The plant is not likely to require feeding in the present state.

ROSE GARDEN.

FOLIAGE BLIGHTED (H. O.).—The foliage sent shows all the signs of injury by a very late frost, but the brown patches are the result of the Rose slugworm, a little pest very much about this year, and you will see recent remarks as to this pest in answer to other correspondents. We should say from the appearance of the small foliage that you did not prune your Roses sufficiently, for all of the varieties you name should have foliage twice the size of that you send; or perhaps the soil needs some good fertiliser, for the autumnal dressing of manure may not have been sufficient. If one expects good Roses, one must feed the plants, and when they are strong and healthy they can better resist these diseases and pests.

THE CHEROKEE ROSE (F. A. S.).—As you say that the American Cherokee Rose to which you refer bears white flowers, it is quite likely that it is the true Cherokee Rose of China, for some authorities say that the Cherokee Rose (*Rosa levigata*, sometimes called *R. sinica*) is naturalised in the West Indies and in some parts of the Southern States of North America. It was introduced to English gardens in 1759, and probably found its way to the United States at an early date. If a specimen of the Rose could be sent, we should have no difficulty in identifying it. One distinct character is its evergreen, three-parted leaves. The plant was at one time named *Rosa cherokeensis*.

ROSES FOR SHADY POSITION (A. G.).—We should advise you to remove some of the old growths from the pergola. There is nothing gained in allowing Rambler Roses to smother other plants or usurp too much space; indeed, the blooming is usually much finer when old growths are removed. The best time to do this is in August, when the flowers have fallen. For the shady border to produce a good blaze of colour, we would suggest Polyantha and Monthly Roses, planting several plants of a sort 1 foot apart each way. Good kinds are Orleans, Jessie, Katherine Zeimet and Mrs. Cutbush among Polyanthas, and Old Crimson China, Fabvier, Leuchteuer, Crimson Pink and White Pet. Some of the lovely Tufted Pansies will grow well in a partially-shaded border, so also will the many brilliant-coloured forms of *Phlox decussata*.

FRUIT GARDEN.

KEEPING PEARS AND APPLES (J. C. Le S.).—We are sorry we cannot throw any effective light on the very interesting question asked by a correspondent. We repeat the question here in the hope that some of our readers may be able to do so: "Could you give me the best methods for keeping fruit, such as Pears and Apples? I know there are many and various kinds of store-rooms, but even with the best of these one cannot keep fruit long. What I would like to know is, if one could devise a plan whereby fruit would be put in large tin vessels and the air pumped out, if the fruit would keep in that manner, say, for six or eight months. I know all about the system of preserving through canning; but, of course, this is heated in order to get the air out. The question, therefore, is: Would fruit keep any time in what is known as empty space, or, I should say, where the air is not?" A large number of

late-keeping Pears and Apples have been added to our collections of late years, so that the urgency of this process is not so greatly felt as it used to be.

NECTARINES AND PEACHES (Bruce).—We have little doubt but that the Nectarines are suffering from skin scorching by hot sun gleams, probably in the early morning when the house was insufficiently ventilated. It is a common occurrence in hot weather, especially in the case of the Nectarine, but seldom so with the Peach. The cause of the Peaches splitting we would attribute to a heavy watering, followed by a hot day and an insufficiency of ventilation. It is better to water in the evening, especially when the fruit is approaching the ripening period, admitting air freely.

GRAPES DISEASED (H. S.).—Your Grapes are suffering from the effects of a disease termed "scalding." It invariably attacks the Grapes about the time the berries are nearly at their full size and when they begin to colour. It is caused by a too cold, close and sluggish atmosphere, especially at night. The way to arrest its further progress and to prevent an attack next year is to ventilate theinery freely front and back at this stage of the Vine's growth, both day and night. Should the weather turn cold at night, have a little heat in the hot-water pipes. This will prevent the temperature falling too low, as well as assist the free circulation of air and so prevent a sluggish atmosphere.

PLANTING APPLE AND PEAR TREES (R. T.).—Apples, we think, would pay you better than Pears. The bush form of trees for Apples, and the pyramid for Pears would, we think, be the best. The Apples should be worked on the broad-leaved English Paradise stock, and the Pears on the Quince. If the ground can be trenched before planting, the progress of the trees afterwards will prove much more satisfactory, and the ground between them may be planted with Strawberries or Gooseberries without any harm being done, so long as they are not planted too near the stems of the trees. On no account must grass be permitted over the roots of the trees. We presume that you wish to grow for sale, and not for home consumption. We therefore give a list of varieties suitable for your purpose: Apples, dessert varieties.—Devonshire Quarrenden (early), Worcester Pearmain (early), James Grieve (September and October), Ellison's Orange (September and October), Cox's Orange Pippin (October to Christmas), King of the Pippins (November to Christmas), Allington Pippin (November to Christmas), Christmas Pearmain (November to January), Barnack Beauty (January to February), Sturmer Pippin (February to May), Apples, cooking varieties.—Potts' Seedling (August to September), Grenadier (October), Lord Derby (November and December), Warner's King (November and February), Annie Elizabeth (January and February), Newton Wonder (February to May), Bramley's Seedling (February to May), Sandringham (February to May), Pears, dessert varieties.—Beacon (very early August), Fertility (September), Hesse (September), Marie Louise (October), Williams' Bon Chrétien (October), Emile d'Heyst (November), Doyenné du Comice (November), Bielding (January to February), Le Lectier (January to February).

KITCHEN GARDEN.

TOMATOES (G. W. B.).—The Tomatoes appear to lack a sufficiency of potash. Water the plants now with a solution of half an ounce of sulphate of potash in two gallons of water.

CELERY BOTANICALLY (J. D.).—From all botanical, as well as from all cultural, points of view, Celery (*Apium graveolens*) is a biennial. If sown very early under glass, the plants grown on strong and rapidly, it often assumes an annual character, as it is sometimes common to find otherwise fine blanched stems in the autumn to have begun inside to send out flower-stems. If Celery be planted out in quantity for seed production, the plants not being blanched, they all bolt to flower the following summer. However, it may be possible to change the nature of Celery, were plants growing in the open ground now blanched and the leaves kept rather hard picked for soup flavouring; also, if flower-stems broke, these were picked out. It is quite possible in such case that the whole nature of the plant might be changed, but we have had no experience of it. Is the writer you refer to really worth powder and shot?

CABBAGES (L. W. S.).—Your Cabbages, &c., are attacked by the Cabbage-root maggot. This is the grub of a blackish, two-winged fly, rather similar in appearance to the house-fly. It lays its eggs near the Cabbage root, and sometimes upon it, in May or June, and the grubs pupate in the soil, turning to flies after a short time, there being about three, perhaps four, broods during the year. The pest is extremely difficult to deal with, and seems particularly abundant and troublesome this year. Some success has attended watering along the rows with an emulsion of carbolic acid made by dissolving 1 lb. of hard soap in one gallon of boiling water to which is added one pint of carbolic acid, the whole being churned with a syringe until thoroughly emulsified, and then diluted with twenty times its bulk of water. Care should be taken not to touch the plants when watering. Nitrate of soda will sometimes prevent the flies from laying their eggs, and the American growers put a piece of card close on the soil round the plants so as to prevent the fly getting near.

MISCELLANEOUS.

FUNGI (M. D.).—You would probably find the best book with plates of British fungi is "Cooke's Illustrations," which may be purchased for about £12 or £13. Cheaper books with coloured plates are published from time to time, but it is very difficult to get the colours true.

Routledge have recently published one containing figures of many and descriptions of most of the larger fungi. You will find full descriptions in "Masse's Fungus Flora" and W. G. Smith's "British Fungi" (published by the British Museum). Your fungi are apparently (a) *Russula cyanosantha*, not *A. heterophyllus*; (b) *Amanita rubescens*; (c) *Polyporus squamosus*. Badham's is the best book on edible fungi; but you, as a medical man, will recognise that not all people are affected in the same way by fungi.

NAMES OF PLANTS.—*Columel E. P. B. S.*—The Roses are: 1, Marie van Houtte; 2, Souvenir de Pierre Notting; 3, Pride of Waltham; 4, Comtesse F. Hamilton. —*G. H. Sheffield.*—1, Petals fallen; 2, Fisher Hohnes; 3, Prince C. de Kohau; 4, Caroline Testout. —*H. U. Hyde Park.*—1, *Ulmus campestris viminalis aurea*. —*Ignoramus.*—1, *Sedum stoloniferum*; 2, *Sedum spurnum*; 3, *Tunica prolifera* (not rare). —*R. A. Dumfriesshire.*—1, *Spiraea canescens*; 2, *Geranium Endressi*; 3, *Philadelphus microphyllus*; 4, *Poterium canadense*; 5, *Cassinia fulvida*; 6, *Stachys Betonica* (Wood Betony); 7, *Berberis vulgaris* (Barberry); 8, *Lonicera alpigena*; 9, *Sutherlandia frutescens*. —*E. M. Parkstone.*—1, *Rhus Cotinus* (Venetian Sumach). —*G. W. G. Yorks.*—1, *Sidalcea listeri*. —*Neelans.*—1, *Michauxia campanuloides*. —*P. H., Airdrie.*—1, *Ceptherra glauca*; 2, *Sidalcea candida*; 3, *Centaurea montana*; 4, *Lycchnis dioica flore pleno*; 5, *Dicentra formosa*; 6, *Geranium sanguineum* (Bloody Crane's-bill); 7, *Poterium canadense*; 8, *Spiraea Menziesii*. —*P. A. S., Wrexham.*—1, *Gemista tinctoria* (Dyer's Green-wood); 2, *Dianthus deltoides* (Maiden Pink). —*M. M. F.*—1, *Six inches*, *Oxalis floribunda*; 1 foot, *Linum grandiflorum* 2 feet. (Another *amena flore pleno* (Godetia)). —*A. T. U.*—1, Carnation, crimson self, Nox; 2, seedling, ragged rose self; 3, seedling, white-ground Picotee, heavy purple edge ground not clean; 4, seedling fancy.

SOCIETIES.

NATIONAL CARNATION AND PICOTEE SOCIETY.

The annual exhibition of the southern section of this Society was held at the Royal Horticultural Hall, Vincent Square, Westminster, on July 23. By a general consensus of opinion the quality of the blooms was decidedly good, although amateurs in Southern Counties would have done better had the show been ten days earlier. There were numerous non-competitive groups, chiefly of herbaceous plants, which brightened the hall and helped to relieve the inevitable monotony of show-boards and vases. In the early part of the afternoon the attendance was meagre, but later on visitors came to the hall in good numbers.

FIRST DIVISION.

For a stand of twelve blooms on cards, bizarres and flakes, Mr. C. F. Thurstan of Wolverhampton led the way, closely followed by Mr. J. Douglas, Great Bookham, and Mr. H. Mathias, Medstead, Hants. The varieties Flamingo, Ophelia and Gordon Lewis were well represented.

In the class for twelve selfs, shown on cards, Mr. Mathias was first with a splendid stand, including a dressed flower of Mand Allen, which was awarded a special prize as the premier self Carnation. Mr. Thurstan was second and Mr. J. Douglas third.

Mr. Mathias was again successful in a stand of twelve fancies. A beautiful bloom of Becky Sharp was awarded the special prize as the premier fancy Carnation. Messrs. Thurstan and Douglas followed in the order named.

Messrs. A. R. Brown, Limited, King's Norton, were first for twelve Picotees, white ground; Mr. J. Douglas second, the latter showing a capital bloom of Amy Robsart, the premier heavy-edged white-ground Picotee in the show.

For twelve Picotees, yellow ground, Mr. H. Mathias was first with a perfect stand in colour and quality. Mr. J. Douglas' second-prize stand contained a dainty bloom of Mrs. J. J. Keen, awarded the special prize as the premier heavy-edged yellow-ground Picotee.

Mr. J. Douglas was an easy winner for four selfs in vases, showing Bob Aeres, Daffodil (of exceptional size), Mrs. G. Marshall and Mrs. G. Jones. It was an excellent exhibit, and aided the exhibitor in securing the silver cup given to the winner of the highest aggregate number of points gained in the first division.

Mr. Douglas was again successful for four fancies in vases, his vases of Pasquin and Lord Steyne being much admired. The same exhibitor was first for four white-ground fancies. The variety The Bride was in great form. He was again first for four Picotees, yellow ground. In the last-named class Mrs. J. J. Keen was one of the best varieties shown.

A good deal of enthusiasm was centred around the class for nine distinct selfs, fancies and yellow-ground Picotees. Mr. Douglas was first with a superb collection, followed by Mr. Mathias and Messrs. A. R. Brown, Limited. We were much impressed with the excellence of the blooms of Linkman shown in the first two collections.

SECOND DIVISION.

Three lovely blooms of Lady Hermione enabled Mr. D. Walker of Kilmarock to carry off the premier award for a vase of pink or rose self varieties.

Mr. R. Morton, Woodside Park, was first in a similar class for whites with first-rate blooms of Mrs. Eric Hambro; and again for dark red or maroon selfs with Mrs. George Marshall.

Mr. Morton was again to the fore in a well-contested class for a vase of yellow selfs. The variety Daffodil was much in evidence in this class.

For three blooms of red or scarlet selfs, Mr. W. H. Parton, Moseley, was first, followed by Messrs. Walker and Morton.

Mr. R. Morton was once more successful in the class for a vase of yellow-ground Picotees, showing Exquisite in fine form; and again for buff or terra-cotta selfs with lovely blooms of Elizabeth Shiffner.

Mr. G. D. Ford, Aceck's Green, was first for yellow or buff ground fancies with exquisite blooms of Mrs. Penton; and Mr. W. H. Parton led the way for three fancies other than yellow, buff or white ground with the vivid pink J. Sebright.

There was very keen competition in the class for six selfs, fancies and yellow-ground Picotees, and that successful exhibitor Mr. R. Morton again took premier honours. Mr. W. H. Parton was a good second, and Mr. E. J. Price, Bourneville, was a creditable third.

The dressed blooms shown on boards, each with a white paper collar, still attract much attention, especially from those who admire the Carnation solely as a florist's flower. Mr. H. R. Taylor of Cheam and the Rev. C. A. Gottwaltz were notable winners in this section.

The Martin Smith Memorial Challenge Cup, open to amateurs only, was won by Mr. Robert Morton.

The premier award for table decorations was won by Mr. E. J. Price, Bourneville.

THIRD DIVISION.

This division is set aside for those who do not grow more than 300 plants in pots and do not employ a gardener regularly nor advertise plants for sale. The quality of the blooms in this section was remarkably good, and we much regret that pressure on our space prevents us from giving a detailed report.

Mr. J. B. Willett of Yardley was first for six selfs, showing first-rate blooms of Sir Galahad and Elizabeth Shiffner.

Mr. Willett was again successful for six fancies, followed by a highly creditable exhibit from Mr. E. C. Chambers, Wellingborough.

OPEN CLASSES.

Some of the very best blooms in the show were to be seen in the open classes. Mr. Douglas was a prominent exhibitor, gaining first prizes with excellent vases of Bob Aeres, Rosy Morn, Daffodil, Mrs. G. Jones and others. The Cartwright Challenge Cup and a silver-gilt medal were won by Mr. Douglas for the excellence of his exhibits in the open classes.

Mr. H. Mathias was successful in the class for nine white blooms, showing Titan in unrivalled form and purity.

Mr. Lakeman, who also showed a magnificent non-competitive group of Carnations, gained the first place for nine dark red or maroon selfs showing the well-known variety Mrs. George Marshall.

HASLEMERE HORTICULTURAL SOCIETY.

The forty-second annual show of this society was held in the grounds of Whitwell Hatch, Haslemere, the residence of Earl Altamont, on Wednesday, July 24. The glorious natural surroundings of the place made the occasion a delightful change, especially after the dingy setting of some of the larger shows. The entries were numerous, the quality of the exhibits decidedly good, and the attendance was satisfactory. There were a few good non-competitive exhibits. Messrs. G. Jackman, Woking, staged a collection of Roses in good condition. They also put up a few hardy perennials. The Guildford Hardy Plant Nursery had a stand of perennials, including herbaceous Phloxes and many other good things. Messrs. Maurice Young and Sons, Milford Nurseries, also staged perennials and a few Roses, as did Messrs. Gauntlett. The amateurs' and cottagers' sections were filled to overflowing with capital produce, and it would be invidious to single out any individual exhibitor for special praise. The children's classes were interesting, and other societies might take a lesson from Haslemere. Collections of mosses, wild flowers and pressed specimens were well staged, and betokened infinite care on the part of the little exhibitors, and when they (the prize-winners were mostly boys) received their prizes from Countess Cawdor, their smart military salute was delightful to behold. The band of the Royal Engineers (Aldershot) on the tennis lawn and the morris dancing by the village school-children helped to impart a fairy-like aspect to a most enjoyable show.

BRIGHTON AND SUSSEX ROSE AND SWEET PEA SHOW.

The twenty-first annual exhibition was held at the Dome and Corn Exchange on July 23 and 24. This date, unfortunately, proved too late for many, who perforce were compelled to cancel their entries, especially in the Rose classes. The trade, however, made up for the deficiency. Specially attractive was an arrangement of ornamental plants—stove and greenhouse—by Messrs. Balchin and Son, Brighton, as also the lengthy staging of rare and choice vegetables, Melons, &c., tastefully interspersed with hardy and other choice flowers, displayed by Messrs. Sutton and Sons, Reading, both exhibits receiving an award of a gold medal. Another remarkable display was that of Carnations from the Clury Nurseries, Laogley, Bucks, which evoked general admiration and many regrets that the committee had not bestowed upon it a

higher award than a silver-gilt medal. Other recipients of the same class of medal were: Mr. G. W. Piper, Uckfield, for Roses; Messrs. Wells and Co., Mersham, a brilliant display of Phloxes and Carnations; Barnham Nurseries, Limited, Roses and choice herbaceous flowers; Mr. Frank Woollard, Brighton, Roses. Silver medals were awarded to Messrs. Blackmore and Langdon, Bath, for a striking display of Begonias; Messrs. Cheal and Sons, Crawley, Sweet Peas and miscellaneous hardy flowers; Messrs. George Miles and Sons, Mr. James Davies, and Messrs. Tilley and Sons, Brighton, horticultural sundries; and Messrs. Peters, Brighton, beautifully-displayed floral designs.

COMPETITIVE CLASSES.

In the open classes for plants, Mr. Frank Woollard secured the handsome silver cup, the society's silver medal and first prize for a group of Roses, either plants or plants and cut blooms.

Miscellaneous group of flowering and foliage plants arranged for effect in a circle 10 feet in diameter: First and silver medal, Mr. Charles Moppett, jun.

Mr. George Chandler led for a table of flowering and foliage plants, followed by Messrs. George Miles and Son and Mr. Charles Moppett, jun., in the order named. Mr. Chandler was successful in the class for a circular group of miscellaneous flowering and foliage plants, winning outright the handsome silver cup offered in this class. The Corporation's Challenge Bowl, offered for retention for one year to the most meritorious exhibit in the show, was awarded to this group.

In the cut-bloom class, Mr. Frank Woollard was the most successful competitor, scoring for thirty-six cut blooms of Roses, distinct, and also for twenty-four blooms, distinct. Mr. W. R. Hammond was first for twelve blooms, distinct, followed by Mr. E. W. Morris, Uckfield. In the classes for eighteen blooms, Teas or Noisettes, and twenty-five long-stemmed Roses, Mr. Frank Woollard again led.

SWEET PEAS.

Twenty-four sorts in twenty-four vases, twenty stems of each: First and silver medal, Mr. W. R. Hammond, Burgess Hill; second, Mr. H. MacFadyen, Cuckfield Park; third, Mr. C. Marshall.

For twelve sorts in twelve vases, Mr. W. H. Smith led, with Mr. G. Pilgrim second and Mr. W. G. Pelley third.

For thirty stems of white, Mr. Samuel Watkins was first with Etta Dyke; second, Mr. W. H. Smith; third, Mr. A. Sayers.

Thirty stems of pink: Mr. W. H. Smith was first with excellent sprays of Hercules; second, Mr. A. Jewell; third, Mr. J. Martin.

Thirty stems of blue or mauve: Mr. A. Jewell came first with Flora Norton Spencer; second, Mr. H. MacFadyen; third, Mr. W. H. Smith.

Thirty stems of crimson or scarlet: Mr. A. Jewell again led with Maud Holmes, followed by Mr. W. H. Smith and Mr. G. H. Bennett third.

Six vases of Carnations, eighteen blooms in each vase: The society's silver medal and first prize fell to the Clury Nurseries, with lovely blooms of Mikado, Fair Maid, White Perfection, Winsor, Mrs. C. W. Ward and Lawson Enchantress. Mr. G. Eastwood, Hassocks, was second.

EAST ANGLIAN HORTICULTURAL CLUB.

OVER one hundred members and friends joined in the summer excursion of this club to the noted gardens at Westwick House, Norwich. Colonel Petre, through his genial gardener, Mr. George Davison, had thrown the whole of the gardens, woods and fruit farm open for the party to ramble at their own will. The day was rather cooler than the previous few days, which was much to be thankful for. Almost as soon as the visitors entered the gardens they were passing under a huge pergola over three hundred feet long, and covered with all the choice subjects associated with such locations. The varieties of Vitis were most numerous, and gave a charming effect. A little further, and the visitor was passing along a herbaceous border over three hundred and fifty feet in length and at no part less than 30 feet wide. The subjects here are planted in large bold masses, and to see them in their glory is a sight to be remembered. Most hardy plant growers know what Mr. Davison has done to improve the Montbretia, and it was not to be wondered at that huge tracts of the garden are planted with this flower. We saw some plants not yet in commerce, bold in foliage and pictures of health. Everything in the greenhouses and vineries seems thriving at its best, pointing all along to the skill of the man in charge. Fruit-growers, and especially those who have visited the autumn shows of the Royal Horticultural Society for British fruit, know of Mr. Davison's skill in the culture of Pears. To see his trees is an education. This year they are better than ever, and we shall not be surprised to hear that important prizes are won with fruit from them this year. Apples, too, are looking in first-class condition. After the mansion garden had been thoroughly inspected, the party, under the escort of Mr. Davison, wended their way to the fruit farm, in which Colonel Petre has taken great interest. Tons of Black Currants had just been gathered and sent away, and the pickers were busy upon the Raspberries. All these pickers are local people, and the money they are able to earn in this work is a great benefit to the local community. The woodlands, noted for their many kinds of timber, especially Firs, were not forgotten, and the large lakes added a charm to the whole of the sylvan scene. Much more could be said, but one must not encroach on the space further. Suffice it to say that everyone interested themselves and were well pleased with the visit.

THE GARDEN.

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AUGUST 10, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices : 20, Tavistock Street, Covent Garden W.C.

NOTES OF THE WEEK.

The Indian Bean Tree.—This very ornamental tree, botanically known as *Catalpa bignonioides*, is flowering with remarkable freedom this season. It is a very accommodating tree, flourishing in almost any soil, and even thriving in the smoke-laden atmosphere of large towns. It is, however, seen to the best advantage as an isolated specimen on a lawn. The flowers are followed by long, Bean-like pods, which give this tree the popular name of Indian Bean.

Camellias Fruiting in the Open.—The beautiful grounds of Lady Tress Barry at St. Leonard's Hill, Windsor, have long been noted for their Camellias. Here may be seen hedges and dells of Camellias, and healthy specimens from 15 feet to 20 feet in height. The Camellia is as hardy as the Laurel, and by way of proving its hardiness, many of the trees are now bearing fruits about the size of Walnuts. If the fruits are allowed to remain, the seed will ripen. In fact, self-sown Camellias abound in the gardens at St. Leonard's Hill.

The Cumberland Lodge Vine.—The famous old Vine at Cumberland Lodge, Windsor Park, is again carrying a handsome crop of berries. It is not generally known that this Vine is much larger than the one at Hampton Court. Both are of the same variety, namely, Black Hamburgh, and it is hard to say which is the older of the two. The vinery at Cumberland Lodge is a three-quarter span 138 feet in length. The Vine completely fills this large house, although it is doubtful if it could extend much further, as on hot days the branches furthest from the main stem are inclined to flag. The bunches have been reduced in number, but even now this veteran Vine is carrying 400 bunches of excellent quality.

Treating Hard Seeds with Sulphuric Acid.—In America and other countries where exceptional heat and drought are often experienced just prior to harvesting seeds, it is found that many of the leguminous plants, such as Clover and Melilotus, fail to germinate when sown, presumably on account of the hardness of the outer coating of the seed. The same difficulty has presented itself in this country during recent years among certain varieties of Sweet Peas, especially when the seed has been grown in California. Bulletin No. 312, recently issued from the Cornell University, New York State, is devoted to the results obtained by treating various leguminous seeds, as well as seed of Cotton, with concentrated sulphuric acid or commercial sulphuric acid of about 1.84 specific gravity. The best results were obtained by immersing the seed in the acid for about ten minutes, subsequently washing it with clean water, and either allowing it to dry or sowing it at once. The results obtained in all cases were remarkable, the acid

treated seed giving a much larger percentage of germination than the untreated. We presume that anyone interested in the subject could obtain the Bulletin by applying to the Cornell University.

A Beautiful Annual for Edging.—One of the most beautiful and pleasing of the annual flowers that we have in our garden just now is *Leptosiphon densiflorus hybridus*. A foot-wide edging skirts a pathway for some yards, and whenever the sun is shining the plants are studded with myriads of small, star-like flowers—jewels the ladies call them. These comprise a number of pleasing art shades that are not to be found in any other hardy flower. The plants are about nine inches high. The seeds were sown in the open, where the plants are now growing, early in April. As an annual for edging this little plant is unsurpassed, and it is difficult to understand why it is not more extensively grown.

Vegetables on Waste Land.—One of the most interesting exhibits at the Royal Horticultural Society's meeting on Tuesday of last week was composed of three collections of vegetables that had been grown in the Church Army City Gardens, Stillington Street, Westminster. These gardens three years ago were builders' waste, yet the produce exhibited was, for the greater part, of excellent quality. Indeed, we have never seen better Shorthorn Carrots, red and white Cabbages and garden Kohl Rabi at any local country show. We subsequently had an opportunity of inspecting the plots where the vegetables, as well as flowers, were growing, and were much impressed with the cleanliness and excellence of the whole, as well as the great variety that is being grown. This cultivation of waste spaces is a most praiseworthy movement, and the condition of the plots under notice reflects the greatest credit on the men, also on those who undertake the work of supervision.

Nelumbium Flowers from the East.—When passing through Covent Garden one day last week, we saw, with no little surprise, about a score of the stately blooms of *Nelumbium speciosum*, beautifully arranged in a large decorative basket. The flowers were in the possession of Mr. R. F. Felton, florist, of Hanover Square, who informed us that they had been sent direct from the East over a distance of 2,000 miles, and had taken five days in transit. The flowers are like those of a gorgeous pink Water Lily, borne on long stalks. The largest flower measured 11½ inches across, and the basket of blooms was 5 feet in diameter. The flowers are said to remain fresh for ten days or a fortnight, and for decorative effect and grandeur of individual blooms they are unrivalled. This basket, which is the first of several consignments to be sent, has, we learn, been presented to the Queen. *Nelumbium speciosum* is the Sacred Egyptian Bean, and from the most remote periods has been regarded as the emblem of fertility.

CORRESPONDENCE.

The Editor is not responsible for the opinions expressed by correspondents.

A Good Culinary Pea.—We have this year grown a Pea called Veitch's Prestige, and it has done so excellently that I pen these few words in its favour. The pods are handsome in form, and many carry nine Peas in them. The flavour is superior. Its haulm is very robust, and I should think the striking appearance of the pods would render it suitable for the show table. Its height is given as 3½ feet, but on our strong soil it is rather more.—C. TURNER, *Ken View, Highgate.*

Roses General Macarthur and Richmond.—It was the writer's good fortune recently (July 27) to look round the beautiful grounds of St. Leonard's Hill, Windsor, and while doing so I was shown some remarkable examples of General Macarthur and Richmond Roses. Of these varieties they were the best I had ever seen, particularly of the former. The plants were so unusually healthy and strong and plentifully budded—one growth actually carrying a flower-head of thirty-four buds. Mr. Brown, the head-gardener, said General Macarthur was, with him, by far the better Rose of the two, being equally good for early and late flowering, also most useful for cutting purposes. I suppose this marked difference in its floral behaviour, profuseness in some districts and slackness in others, must be due largely, if not entirely, to a difference in the soils.—C. T.

Exhibiting Carnations.—I have read with much interest, during the last few months, the correspondence *re* the "dressing" of Daffodils at shows, and should now like to ask your readers' opinion as to the showing of Carnations. Last week, for a local show, I set up a nice lot of Douglas' Carnations, all fair blooms and shown as grown, with their own foliage, in vases, as I always show them. The only other exhibit was a collection of somewhat indifferent blooms, "fluffed" out and shown with paper collars on a board. This collection was awarded first prize, and during the afternoon I asked the judge if I had lost first prize owing to my setting up, and he practically acknowledged it and said that mine were the better blooms. Now, surely this is all wrong, and I would appeal to all compilers of schedules to insert below Carnation classes a footnote, such as "To be shown as grown" or "Manipulation of the calyx will disqualify." We have this in our Carnation classes in the Devon Daffodil Society. I am quite sure I shall have Mr. W. A. Watts' sympathy in this matter. What rule has the National Carnation Society on this point?—STRODE. [The National Carnation Society provides classes for flowers shown on boards and others for flowers shown as grown.—ED.]

Crocus cilicicus at Newry.—The first flower of this species opened on the last day of July, thus showing it to be the first Crocus to flower, and also adding one to our list of blue flowers, of which we never have too many.—T. SMITH, *Newry.*

Campanula Zoysii.—Our gardens just now are abloom with Campanulas, but there is none prettier than *C. Zoysii*, one of the dwarfiest and quaintest of the race. It is a dainty little light blue gem with a curiously-constricted neck. Some people find *C. Zoysii* difficult to

next it on my pergola, is cut every year by the cold winds. I have found the Tea Rambler the healthiest of them all, and this year, in spite of a good deal of drought, it has made enormous growths, 12 feet and more long. It is charming in colour and so sweet-scented, and I quite agree with "A." (page 386, August 3) in admiring its handsome foliage.—ESSEX READER.

Hydrangea in a London Garden.—The value of *Hydrangea Hortensia* for gardens in London and other large cities is well demonstrated by the accompanying illustration, which represents a fine specimen growing in Mrs. Batter's garden at Sarsfeld Road, Balham, London, S.W. Mrs. Batter writes: "My *Hydrangea* is 7 feet 4 inches high and has over two hundred flower-heads. Most of them measure 24 inches in circumference. It faces south-west and requires protecting from frost. I find that it likes plenty of water, and I give it weak doses of Clay's Fertilizer twice a week."

Roses Lady Gay and Dorothy Perkins.—One finds quite a conflict of experience regarding these two Roses in different gardens, and a little interchange of this might be useful to those who delight in these rambling Roses. Going through a Scotch garden the other day, where there was a good variety of these Roses, I had my attention drawn to the unsatisfactory appearance of *Lady Gay* as compared with *Dorothy Perkins*. In all cases the former was not looking well, showing a want of vigour in every way and a yellowish colouring of the leaves we do not expect to find in a healthy Rose. This was, it appeared, quite the usual characteristic of *Lady Gay* in this garden, and it is to be discarded, not only because of this, but because the blooms are smaller and not so freely borne as those of *Dorothy Perkins*. The latter is quite a success in the garden referred to, and is grown as handsome pillars and weeping standards. I have observed a somewhat similar thing in several



A WELL-GROWN HYDRANGEA IN A LONDON GARDEN.

other gardens, so that it is not surprising to find some scepticism expressed regarding the alleged superiority of *Lady Gay*. I must say, however, that in my own garden *Lady Gay* is proving all that has been claimed for it, and this induces one to think that the different experiences must be a question of soil or position. In my garden, in practically the same district as the garden mentioned at the beginning of this note, *Lady Gay* is superb, giving just as free growth as *Dorothy Perkins*, and larger flowers more numerous, borne and slightly deeper in colour than *Dorothy Perkins*. Here it is in a sheltered, somewhat cool spot, and the best plants are covering an arch. I surmise that in the gardens where *Lady Gay* does not thrive so well it has a warmer position than is good for it. I do not pretend to assert that this is the cause of the differences which are evident, but others may have something to say on the point which could help to elucidate it.—SUN ROSA.

Rose Conrad F. Meyer.—I was asked to say (page 350, July 13) whether I had given my bushes of *Conrad F. Meyer* any special treatment. They were planted in a new border dug out of old pasture-land, and beyond digging in some manure when the border was made, they have had nothing further done for them. I have done no pruning beyond cutting out a few of the older growths every year, and have let them run up 10 feet to 12 feet high. The border faces east, and they are well protected from the North by higher shrubs.

Rose Tea Rambler.—I have never had this Rose cut by frost, though my garden is very exposed, and the climbing Rose *Réve d'Or*, which grows

Laburnum alpinum.—It is extraordinary, to my mind, how comparatively little *Laburnum alpinum* is grown, as it is far in advance of the common *Laburnum*. This probably happens because it is little known. I find it grows taller and flowers more abundantly than the ordinary form, while its long, pendent racemes of flowers are very graceful, reminding one of *Wistaria multijuga* in shape and length of raceme. The true Scotch form should be obtained from a reliable firm of nurserymen.—B., *Weybridge*.

The Indian Horse Chestnut.—In reference to the interesting note on *Æsculus indica* published in the issue of July 27, page 376, I look upon this tree as one of the most ornamental Chestnuts in cultivation. I am sending a photograph, showing a raceme of daintily-coloured flowers above the shining green foliage, which was taken from a tree in a Surrey garden in June of the present year. It is a great pity that it is a little less hardy than the majority of the Chestnut family, but in the Southern Counties, at all events, it appears to grow well, as is evidenced by the trees at Barton in Suffolk, which are between sixty feet and seventy feet in height. It is a native of the Western Himalaya, where travellers say it is found growing at an elevation of 8,000 feet to 10,000 feet.—SPARTAN.

A Useful Cool-House Orchid.—The genus *Oncidium* contains many fine species, but *O. macranthum* is undoubtedly among the best, and a strong point in its favour for an amateur is that it will thrive in the cool-house among the *Odontoglossums*. The leaves are from 15 inches to 20 inches long, and the scapes sometimes reach a great length, while these are occasionally branched. Some growers train them along the roof, but the usual plan is to place three or four stakes in the pot and carefully tie the spike round. A charming effect is thus produced. Each flower is large, chiefly yellow, shading to olive brown, with a tinge of violet purple on the lip. The cultural details are simple. Always keep the compost in a sweet condition, and when it is deemed necessary to repot a specimen, the spike should be pinched out to give the plant a chance to recuperate. Otherwise it needs the same treatment as *Odontoglossum crispum*.—S.

FORTHCOMING EVENTS.

August 12.—United Horticultural Benefit and Provident Society's Committee Meeting.

August 13.—Royal Horticultural Society's Meeting and Exhibition of Gladioli. Lecture at 3 p.m. by Mr. Pulham on "The Construction of the Wisley Rock Garden." Clay Cross Flower Show.

August 14.—East Anglian Horticultural Club Meeting. Exmouth Show (two days).

August 15.—Malton Flower Show. Blairgowrie Flower Show. Wylam Flower Show. Capel Flower Show. Merthyr Tydvil Show.

August 17.—Urmston Horticultural and Poultry Show. Burnley Flower Show. Seascale and Lake District Flower Show.

August 21.—Shrewsbury Flower Show (two days).

TREES AND SHRUBS.

THE PROPAGATION OF SHRUBS FROM CUTTINGS.

ALTHOUGH the propagation of some kinds of shrubs from cuttings offers no difficulties to those who have an insight into the elementary details of propagation, there are others which require a more intimate knowledge of their peculiarities before they may be increased with any degree of success; therefore in the ensuing notes attention is directed to a few points worthy of consideration by the beginner. As a rule, July, August and early September are the best months in which to take



THE INDIAN HORSE CHESTNUT (*ÆSCULUS INDICA*).

cuttings, although even May and June are not too early for some kinds.

Generally speaking, two kinds of soil are sufficient for most shrubs—that in which peat predominates for one kind, and that where loam forms the principal part for the other kind. In each instance a fair amount of sand is necessary, and the two composts may be formed as follows: Take two parts of good peat and mix with it one part of silver sand. Leave some of the compost in a roughly-broken condition and pass the other through a half-inch meshed

sieve. For the other mixture three parts of fibrous loam, one part of leaf-mould and one part of silver sand are necessary. As in the other case, some must be left rough and the remainder be passed through a sieve.

Clean pots are in either case a necessity, and ample drainage is required. As a rule, the latter may be obtained by filling the pots one-third with clean crocks. Over these place some rough material, then the coarser soil, and fill up to within a third of an inch of the top with fine soil. Over the whole a layer of silver sand may be placed. In each case the compost must be made firm in the pots, but in the instance of the peaty soil it must be specially firm. Pots from 3 inches to 6 inches in diameter are, as a rule, more satisfactory than either larger or smaller ones.

The convenience at the disposal of the propagator must decide where the cutting-pots are to be placed. In any case a close atmosphere is necessary, but whether this is provided by a cold or a warm frame is immaterial in some cases, for the cuttings may be expected to root as well in one as in the other, with, of course, a difference in time. There are instances, however, of cuttings which will not root in violent heat, others which object to artificial heat of any kind, and others, again, which root better if given a fair amount of artificial heat.

The Right Kind of Cutting to Select.—

It is only by actual experience that one is able to decide when the cuttings are in the best condition for rooting quickly. As a rule, young shoots are in the best stage for rooting when they are becoming a little firm, especially when a fair amount of heat can be given. For those that require cold-frame treatment entirely, the cuttings are usually more satisfactory if allowed to become somewhat more firm. As early as the third week in May short shoots of *Diervillas*, *Forsythias* and *Philadelphuses* may be taken. At that time they may be placed in a warm propagating-case or in a hot-bed, and will root within a fortnight. If, however, cuttings of the same shrubs are left until the end of July, they take a long time to root, and do not start away so vigorously as those taken at an earlier date. June and July, however, may be accepted as suitable months for *Spiræas*, *Prunus triloba*, *P. japonica* fl.-pl., *Escalonia*s, *Kerria japonica*, species of *Rose*, *Laurels*, *Aucubas*, *Tree Ivies*, *Olearias*, *Cornus Spaëthii*, *Viburnums*, *Honeysuckles*, &c. July and August are the best months for *Heaths*, *Rhododendrons* and kindred shrubs. As a rule, cuttings 4 inches to 5 inches long are more satisfactory than longer ones; but in the case of members of the *Erica* family they must be shorter, and in

the case of the various *Heaths* they are made, as a rule, from 1 inch to 1½ inches long. With such delicate cuttings as *Heaths* great care must be taken in trimming the leaves away from the lower parts, for if the bark is injured in any way, the chances of rooting are diminished. Although it is not possible to give any hard-and-fast rule for the depth to which the cuttings must be inserted in the soil, a good average may be suggested as one-third the depth of the cutting. It is very important, however, that the bases of

the cuttings should fit firmly on the soil and that they should not be left in a condition which is popularly known as being "hung," that is, secured near the surface of the soil and left loose below. Full use must be made of the outer margin of the pots when inserting cuttings, for those in that position root more quickly than others nearer the centres of the pots. As soon as inserted a thorough watering must be given, and the pots must be placed in the positions where they are to remain until the cuttings are rooted. A warm propagating-case or hot-bed of manure will suffice for warmth-loving subjects. Plunge the pots in Cocoanut fibre, for that helps to keep the soil moist without over-watering. Cases and frames must be kept close, and in the case of Heath cuttings a bell-glass placed over each pot will do good.

Cuttings to be placed in cold frames are best dibbled into the soil of the frame. Two subjects which root well in cold frames, but are a failure in heat, are *Berberis stenophylla* and the double-flowered Gorse. Other things which may be placed in the same frame are Brooms, conifers such as variegated Yews, varieties of *Cupressus lawsoniana*, *pisifera* and *obtusa*, varieties of *Thuja*, &c. Hollies may also be rooted in such a frame. Give a good watering when the cuttings are inserted, and keep the frame close and shaded from bright sun. Very little subsequent watering will be necessary, but the cuttings must not be disturbed until the following April. As the cuttings begin to form roots, the cases or frames may be gradually ventilated until the young plants are hard enough to remove, when they may be placed in a cold frame for the winter.

CEANOTHUS AZUREUS GLOIRE DE VERSAILLES.

ANY reader requiring to cover a south wall should try *Ceanothus azureus* Gloire de Versailles. *Ceanothuses* have been flowering profusely this summer, possibly from the ripening they received last year. None has been more beautiful than *C. azureus* Gloire de Versailles, which has been, with me, a sheet of bloom for weeks past. As the plant shown in the illustration had encroached over the bed in which it is growing, I cut it back in March last, with fear and trembling that doing so might injure the flowering this season; but to my joy I found my fears were not justified. I do not protect this plant or the one on a north-west wall, but I find that the one with a south aspect always produces much more flower than the other. It does not appear to be fastidious as to soil, although I presume it would not thrive in heavy clay, unless coarse sand and thorough drainage were provided. As will be seen in the illustration, it flowers very freely indeed, and is certainly one of the best of our hardy shrubs that bloom during the summer, when blue flowers of any kind are none too plentiful.

Weybridge

B.

THE ROSE GARDEN.

ROSES WITH BAD HABITS.

(Continued from page 379.)

Mrs. R. G. Sharman Crawford, exquisitely beautiful in colour, is terribly addicted to mildew, and unless checked will soon taint all the Roses in its neighbourhood. Now that we have a plethora of pink Roses, I know of many growers who are discarding the old favourite.

General Macarthur should not receive a bad word perhaps from the writer, who has on so many occasions recommended its culture, but one cannot be blind to the fact that the full blooms are very

enough to find it a success. If any reader has succeeded in maintaining this Rose in a vigorous state for some years, I should be pleased to hear of his method; but with me it seems to dwindle away with a sort of sleeping sickness. It seems a very unfortunate fact that both with Mrs. Edward Mawley and the more recent

Edward Mawley there should be bad points to chronicle, and I very reluctantly do so, knowing that these two ardent rosarians are held in such high esteem by the whole Rose-loving public. But, of course, they are not responsible for the bad habits of their namesakes. Incidentally, I may mention that a reporter of one of the Belfast papers, in reporting the recent National Rose Society's Show, was perhaps slightly anticipating events when he alluded to our friend as "Sir Edward Morley," for who can say but that this honour has been richly earned, whether it is ever bestowed or not! Now as regards the Rose, it has been very disappointing to most of us. It "blues" terribly, and if there is one good scarlet-crimson bloom out on a dozen plants, the others are all of a violet blue shade, and exceedingly thin also. Possibly in autumn it may be grand, for I cut a fine bloom yesterday.

Horace Vernet has been seen very fine this year, but amateurs who are not "in the know" should be careful how they order this Rose, for it will almost certainly disappoint them as a "cut-back" flower, and unless one is prepared to bud some stocks each year, my advice would be to leave the Rose alone.

Medea is a Rose we may sometimes see looking splendid in a box of Teas, but has anyone found it to be a good Rose in the garden? Most of its flowers fail to open well, although now and then a superb bloom may be cut.

Alice Lindsell is a very uninteresting Rose on the plant. There is far too much "stuff" in it to open freely, and unless shaded the blooms "ball" badly, and if a little wet will rot rather than expand.

Florence Pemberton is another splendid Rose when shaded, but whose blooms come very "soiled" when left to their own devices, the petals being far too thin and papery.

Nita Weldon is a very lovely Rose in the show-box, but it hangs its head in such a dejected fashion on the plant as to be useless in the garden. (To be continued.)

ROSE MRS. DAVID JARDINE.

WHEN Messrs. A. Dickson and Sons sent out this lovely variety four years ago, I predicted that it would have a large demand as a forcing Rose, and my prediction has been fulfilled. Apart from its glorious even colour of bright rosy pink, it possesses such beauty of form and the stems as to render it one of the handsomest of the Hybrid Teas, and its strong fragrance will commend it to all who can fully appreciate this delightful attribute. P.



CEANOTHUS AZUREUS GLOIRE DE VERSAILLES IN A WEYBRIDGE GARDEN.

flat and the colour inclined to a magenta shade, which often will mar the colour effect when the Rose is massed in a bed. I am quite ready to admit that its good points outnumber its bad, but the fact remains as stated, and I am hoping the General will soon be improved upon.

Charles J. Grahame should not have been placed among the Hybrid Teas. It is grand in colour at times, but generally woefully disappointing, the older flowers changing to a dull shade, and all are very thin.

Mrs. Edward Mawley, superb as a one year old plant from half-standards, is of little value as a cut-back; at least, I have not been fortunate

THE ROCK AND WATER GARDEN.

HARDY FERNS IN THE ROCK GARDEN.

In gardens where a cool corner can be given up to hardy Ferns, a charming feature can be introduced at a trifling expense which will remain full of interest and beauty for the greater part of the year, and during the hot days of summer will be one of the most popular resorts in the garden. Ideal natural positions for hardy Ferns occur on many estates, but the West and South-West Counties and many parts of Northern England and Scotland are peculiarly adapted for the purpose, as thereabouts the atmosphere is moist, and numerous shady, rocky glens or valleys are to be found in which waterfalls sometimes occur and rock-strewn streams wend their way, causing the surrounding ground and atmosphere to be constantly moist and cool. Where these favourable conditions do not exist, however, it is often possible to introduce them without any serious trouble, and when a rock garden is being made a portion can easily be so arranged that it will form an ideal home for Ferns.

In Conjunction with the Rock Garden.—Shady places sometimes occur in a scheme of rock gardening, and such places are not fit for sun-loving alpine plants, yet they form good positions for Ferns, especially if water can be introduced in such a manner that it trickles over and between rocks, forming here and there miniature waterfalls, beside which are cool recesses or caves for the accommodation of such a moisture-loving subject as the Killarney Fern, which likes to have its leaves in a constantly moisture-laden condition. In fact, there are very few districts where a collection of hardy Ferns may not be grown, although the number of kinds which should be planted depends entirely on the locality. In Cornwall, for instance, the owner of a garden can select from a much wider field than he whose garden is situated in a less favourable climate.

Kinds to Grow.—The Australian Tree Fern (*Dicksonia antarctica*) is considered a hardy plant in Cornwall, and even in some gardens on the West Coast of Scotland it stands uninjured; but in most parts of the country it would be a distinct failure planted anywhere but under glass. Where it is grown, however, it adds an air of distinction to the garden, for its brown stems standing high above low-growing kinds are distinctly pleasing, while the heads of large fronds allow sufficient light to filter through to supply the requirements of any undergrowth. Other exotic Ferns may be grown with this Tree Fern, one notable kind being *Lomaria procer*, whose dark green vigorous fronds are always pleasing. Without these semi-tender kinds there are many British species and several exotics, all of which are quite hardy and amenable to cultivation, they may be grown in almost any place where the soil is suitable and moist conditions prevail.

The Royal Fern (*Osmunda regalis*) always finds admirers, for its large and stately fronds, which may be from 4 feet to 6 feet in height, are certainly the most conspicuous among British species. It appears to rejoice in light ground, standing just clear of a stream, where the roots can enter the water. *Scolopendrium vulgare* (the Hart's-tongue Fern) is another popular kind which should be well represented in the hardy fernery. It has hosts of varieties, many of which are very prettily crested. There is no need, however, to obtain a collection of the fancy named sorts, for the type is quite as useful for ordinary purposes, and nothing more effective can be desired than the manner in which this plant furnishes roadsides, banks of streams and walls in Devonshire and Cornwall. The Hard Fern (*Lomaria spicata*) is another charming species which is found in moist woods, walls and heathland all over the country, even at a considerable elevation. Vigorous

divided into linear segments, are found clothing many an old wall, bank or tree branch. For crevices between rocks it is well adapted, for it thrives where soil is scarce, providing moisture is plentiful. One of the finest effects made by this Fern which has come under the writer's notice is in the gardens at Mount Edgcombe, for there the branches of a number of trees are literally covered with the species.

The Hardy British Maidenhair (*Adiantum Capillus-Veneris*) may be planted in chinks between rocks where it can obtain plenty of moisture, its popularity and beauty entitling it to a trial wherever a hardy fernery is formed. *Adiantum pedatum*, a native of North America, is another Maidenhair which may be cultivated out of doors. As it grows from 9 inches to 15 inches high, a well-grown plant is a conspicuous object. The Irish form of *Trichomanes radicans* may be



HART'S-TONGUE AND OTHER FERNS IN THE ROCK GARDEN.

examples have their narrow fronds upwards of a foot in length, but in other places they scarcely attain a length of 6 inches. It is excellent for planting about the banks of a stream, among rocks or in other places, and looks well either in small or large patches. *L. alpina* is a good companion plant.

In mountainous districts in Scotland, Wales and various parts of England the pretty little Parsley Fern (*Cryptogramme crispa*) is to be found, and patches of this ought certainly to be planted in the hardy fernery. The short fronds are made up of small delicate segments, and are very attractive. A moist position among broken rock suits it. The Oak Fern (*Polypodium Dryopteris*) is another charming little Fern which is found wild in many parts of the country. It thrives admirably in light, moist ground, and is a general favourite. *Polypodium vulgare* is well known in some parts of the country, for its narrow leaves,

grown in a shaded place where it will be constantly covered with moisture, but it must on no account be exposed to sun or drying winds. Then there are *Aspidium aculeatum*, *A. angulare*, *Asplenium Filix-fœmina* and *Nephrodium Mas*, all with hosts of varieties, which alone would furnish a large fernery, which can be utilised, in addition to such species as *Asplenium Ceterach*, *A. Adiantum-nigrum*, *A. Trichomanes*, *Nephrodium spinulosum* and others. Such allies as *Lycopodium clavatum*, *L. annotinum*, *L. complanatum* and *L. Selago* might well be introduced in the cooler parts of the country, while *Selaginella selaginoides* may be grown in many places and *S. kraussiana* in the warmer parts of the country.

In most cases it would be a mistake to include the Bracken, for it is a most difficult plant to keep within bounds, and there would be a danger of its crowding out choicer subjects. People who have the convenience and do not already possess

a fernery of hardy Ferns would do well to commence the culture of these pretty plants, for they are always a source of pleasure. L. W. P.

A YUCCA FOR THE ROCK GARDEN.

(*Y. ANGUSTIFOLIA.*)

THE long spell of dry, sunny weather during the summer and autumn of 1911 is probably responsible for the freedom with which Yuccas are flowering this summer. One of the rarest and most distinct of the Adam's Needles or Yuccas is *Y. angustifolia*. It is a native of Missouri, Colorado and New Mexico, and is figured in the *Botanical Magazine*, t. 2236. The Narrow-leaved Adam's Needle, as it has been appropriately named, is quite a modest plant in growth, with long, narrow leaves averaging about two feet long and three-eighths of an inch wide. The inflorescence is simple, about three feet high, the individual flowers 3 inches to 4 inches across, cream-coloured, opening in the end of June and early July. This charming Yucca is seen to the best advantage when planted in the rock garden in light, sandy loam.

FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

The Flowering Season.—I hope that my experience has been similar to that of all readers of THE GARDEN this season, because, if so, they have had a most delightful time. My plants have flowered splendidly, as well in regard to profusion as to quality of size, shape and colour in individual blooms. It is not the rule in my garden to carry disbudding to the last degree, but there have been wonderfully fine flowers in threes attractively arranged on a stem. The plants have not suffered from any cause, though at one time they suddenly became the prey of myriads of green fly, of which an end was promptly made, or the cherished plants would quickly have been ruined. The "grass" was exceptionally good, and there were plenty of excellent layers.

Rooting Layers.—Growths which were cut in the orthodox manner about the middle of July are looking satisfactory from every point of view, and if the present promise is maintained, there will not be more than one or two per cent. of failures. It is necessary to keep the mound of soil pleasantly moist to encourage rooting, but care must be exercised not to make it sodden, or more harm than good is bound to follow. Leaves that commence to turn yellow may be reduced in length to remove the unsightly portion, while those that die ought to be immediately removed and burned. Loosening of the surface of the mound is desirable, but it will have to be done with the greatest care, or the layers will be disturbed and the prospects of success seriously

prejudiced. Use a small fork merely to prick into the top half-inch, or a bluntly-pointed stick to scratch it over.

Layering.—If the process of layering is not yet completed, it is necessary that it shall be finished at once, because unless the young plants are well rooted before activity ceases for the year, it is most probable that the losses during the winter months, irrespective of whether the plants are to be in the open ground or in small pots in frames, will be numerous. The later the work is done, the more care is demanded, not only in selecting

against the system is that the Carnation is a perfectly hardy plant, and that it is, consequently, wholly unnecessary to go to the trouble entailed by wintering under cover. This is all very well as far as it goes, but, unfortunately, the majority of us find that we lose some plants in the winter when they are out of doors, and it is invariably those which we were most desirous of saving; hence the advice to keep on the safe side even at the expense of a little more labour. It is well, too, to prepare the soil that is to be used for potting in advance of the actual time of use, because nothing will then have to be done except the potting. The popular mixture of soil upon which amateurs rely for so many plants answers admirably. It consists of three parts of sound, fibrous loam and one part of leaf-mould or flaky refuse manure, according to convenience, with enough sharp sand to keep it quite sweet and open. Mix the ingredients perfectly three weeks or so before the soil will be wanted, and let it lie in a heap meantime. It is wise, also, to prepare the pots and crocks, both of which ought to be scrupulously clean at the moment of use.

Plants after Flowering.

—Many cultivators throw away their plants when they have flowered once, but it is not necessary that this should be done, as they will bloom splendidly the following year. It may be necessary to thin out the growths beyond that which has been done in layering, and a top-dressing of excellent soil, such as a mixture of loam and manure, ought always to be put on them. F. R.

THE CAUCASIAN SCABIOUS.

ONE of the most ornamental and most appreciated of our hardy border flowers is the Caucasian Scabious (*Scabiosa caucasica*), which is also highly prized as a cut flower for exhibition or for the decoration of the dwelling. It is of good growth, while the long stems on which the flowers are borne increase its value for cutting. The Caucasian Scabious grows from one and a-half feet to about three feet high, according to the nature of the soil, and it usually bears a considerable number of large flowers of a pretty

lilac; the form is also highly pleasing, the broad-rayed petals going well with the forets of the disc.

The plant is rather variable in the size of bloom and in the shade of colouring, and some of the select forms are worthy of being chosen when purchasing plants. The white one, *alba*, is appreciated by many, although the colour is more creamy than pure white even when the blooms expand. They afterwards pass off to a good ivory white. The lilac and blue varieties are generally excellent, and one of the finest of these is that called *amena*, which has soft-coloured, large flowers of much substance. Another, named



A RARE YUCCA, *Y. ANGUSTIFOLIA*, FLOWERING AT KEW.

the most suitable shoots, but also in making the cut in the correct place, since woodiness increases with the age of the growths. It will, therefore, in all probability be wise to strip off more leaves than in July, and to make the incision a little higher up the shoot.

Soil for Potting.—In gardens where the soil is extremely close and heavy, and particularly so when the situation of the place is low, it is excellent practice to winter the young plants in small pots in cold frames; and the same may be said of at least a portion of the stock in all places where the choicest varieties are grown. The argument

magnifica, is of even superior excellence, with truly fine flowers of the best form and of pleasing colour. In one called perfecta we have a good variety with flowers of a darker shade than those given by the majority of the plants of *S. caucasica*.

The named varieties are propagated by division, preferably in spring or when the plants have finished flowering; but as they bloom comparatively late—from August until October—spring division is the more suitable. A good stock of plants may be procured from seeds, these being sown in pots or boxes under glass in early spring and treated in the same way as other perennials. Occasionally seeds of the white variety may be obtained, and a large proportion of these will come true.

The Caucasian Scabious is hardy, and its only fault is that in some poor soils the flowers may not come perfect through the absence of one or more of the ray petals. This is a great deformity, and when such occurs the soil should be well enriched with good manure. As a border flower this plant is highly attractive when properly grown.

Dumfries.

S. ARNOTT.

ORIGIN OF SHIRLEY POPPIES AND OTHER FLOWERS.

[In Answer to a Correspondent.]

To answer all your questions fully would require a whole number of our journal. The raiser of the beautiful Shirley Poppies was the Rev. W. Wilks, the secretary of the Royal Horticultural Society. We cannot do better than give their story in his own words: "They originated in this way. In 1880 I noticed in a waste corner of my garden, abutting on the fields, a patch of the common wild Poppy of the cornfields—*Papaver Rhæas*—one solitary flower of which had a very narrow white edging to the four petals. This one flower I marked and saved the seed of it alone. Next year, out of perhaps 200 plants, I had four or five of which all the flowers were white edged. The best of these were marked and the seed saved, and so on for several years, the flowers all the while getting a larger infusion of white to tone down the red, until they arrived at quite a pale pink, and one plant absolutely pure white in the petals. I then set myself to change the black central portions of the flowers, the anthers, stigmatic surface and pollen, from black to yellow or white, and succeeded at last in obtaining a strain with petals varying from the brightest scarlet to pure white, with all shades of pink in between, and with all possible varieties of flakes and edged flowers, and having golden or white stamens, anthers, stigmatic surface and pollen, and a white base to each petal. The Shirley Poppies have thus been obtained simply by selection and elimination."

The Sweet Pea was introduced from Sicily in 1700, but its native country is not quite certain. Its numerous varieties have been obtained partly by spontaneous variation, partly by cross-breeding. The garden Pentstemons are largely derived from hybrids between *P. Cobæa* and *P. Hartwegii*, but perhaps other species have been used. They occur wild in Western North America for the most part. Petunias as we know them are the result of crossing *Petunia nyctaginiflora* and *P. violacea*, both of which occur wild in South America. So with all the other plants you mention. The wild progenitors are frequently very different from, and far less showy than, the plants as we know them in gardens, but their wild forms do occur somewhere, though it may be far distant. The history of many of our garden flowers is scattered through old florists' books and periodicals.

THE KITCHEN GARDEN.

ARTIFICIAL MANURES FOR VEGETABLES.

THESE is now no doubt that artificial manures may be economically used in market gardening, though experiment shows the advisability of not relying exclusively upon them. A dry season may upset calculations, and a full manuring with manure, costly as it is compared to the other fertilisers, is likely then to pay far better. A judicious combination seems to give the best results, but more experiment is wanted. The land at Hadlow (from which most of my knowledge is based) is on clay. However, nearly twenty years' experience at this station has clearly shown the value of the usual mineral dressings to which farmers are accustomed.

Another point gained, in some cases at any rate, is that of quality, though fast-grown green vegetables may in some cases perhaps lose in flavour. At any rate, I have noticed this when growing

THE LATEST PEAS.

THOSE who have a good alluvial soil and like dishes of Peas as late as possible will find that certain varieties are much better than others. A light, shallow soil will grow excellent early Peas if it is well enriched with manure, but for late crops it is necessary to give a deeper rooting medium and, if possible, land of a more retentive nature. Of course, late in the season it is necessary to sow a dwarf or medium grower, and there are some excellent varieties, such as Sutton's Selected Gladstone, 3 feet to 4 feet high, with remarkable vigour and one which is a splendid drought-resister. The older Gladstone Pea was, and is now, much grown for its lateness, but the Selected is superior, and there is no difficulty in having this variety well into November. When the Gladstone type of Pea has been exhibited at the late autumn shows, I have invariably noticed that the exhibitors have been successful, as the pods, though a trifle smaller than some, are so tightly packed.

The older Veitch's Autocrat, which received a first-class certificate from the Royal Horticultural



SHIRLEY POPPIES GROWING NATURALLY IN AN OPEN WOODLAND SPACE.

Spinach on a small scale with nitrate and sulphate of ammonia combined with manure. The plants were decidedly insipid, more so than adjoining material in un-manured ground.

Phosphates in the form of basic slag or superphosphate may be safely used for root crops, Cabbage of all kinds, including Cauliflower and Broccoli, and, in fact, generally, as it is the next important constituent of manure to nitrogen. For second crops, such as spring Cabbage, for example, a few hundredweights of superphosphate on land previously manured for the first crop prove expeditious and economical, though probably without nitrate of soda in the spring a poor crop would result. Spring-planted crops are rather more exacting, as they suffer more from drought, and it would seem inadvisable not to include some manure, except, of course, for Carrots and Parsnips, which, with winter Lettuce and winter Spinach, are crops that can grow in a fertile soil without an immediate application of manure of any kind. Speaking generally, it is the judicious use of artificials in conjunction with farm-yard manure that gives the best results.

G. T.

Society many years ago, still maintains its excellence as one of the best late Peas we have. It has by no means a huge pod, but is of very fine quality and there is no waste, as the pods are quite full. It is a heavy and continuous cropper, with the Ne Plus Ultra quality, grows 4 feet high, and is so well known that I need not describe it. I would ask those who like late Peas in October and November to give Autocrat a trial, as its freedom from mildew and capability to thrive in a dry season place it in the front rank of good late varieties.

Another very fine late Marrowfat Pea is Carter's Michaelmas. This is dwarfer than those named above, and in my experience is the latest variety to set its blossom freely. It is of dwarf, bushy habit and quite free from mildew. The pods are produced in pairs, are large and of a very dark green, and the Peas much wrinkled. It is a remarkably heavy cropper, and though termed the Michaelmas, it may be had in excellent condition well into November. Owing to its dwarfness it is admirably adapted for gardens limited in size. This variety has for some years been grown extensively for August and September cropping, but

I would recommend it for later supplies, sowing specially for that purpose.

Latest of All is a variety less known than those already noted, and, as its name implies, is one of the latest Peas grown. It is a Pea with remarkably rich flavour considering it is produced so late in the season. The pods are not quite so large as those of Late Queen, but the produce is so good that it is one of the most profitable for November gathering. The pods are produced in pairs, and they are borne in great profusion on a dwarf bushy haulm of strong constitution, thus making it most valuable for a shallow soil if given ample manure and grown in trenches with plenty of moisture.

Late Queen is probably better known than most of the foregoing, and, though by no means new, is still one of the most reliable late varieties grown. It is only 3 feet to 4 feet high, of robust constitution, a good one to resist mildew and of splendid quality. There are others, but those named will

Although it seems hardly probable that the Apple mildew will create such havoc as the American Gooseberry mildew, it behoves fruit-growers to adopt more energetic measures to combat its further increase. For two years in succession I have found the fruits of Lane's Prince Albert badly affected with this mildew, the consequences of which have been that the fruits have remained exceptionally small and have been of little marketable value.

According to the Apple Tree Mildew Leaflet, No. 204, issued by the Board of Agriculture and Fisheries, the winter or assigerous form of fruit of this fungus is very rare. I have good reason for thinking, however, that such is not the case, as on several occasions I have found the assigerous stage of this fungus on the fruits of the Apple. Certain varieties of Apples are undoubtedly more susceptible to this disease than others. I have found that Lane's Prince Albert, Bismarck,

I have no doubt whatever that nurserymen are the universal distributors of this disease, as I have frequently seen thousands of Crab and Paradise Apple stocks smothered with this mildew in several large nurseries. These infected stocks are ultimately budded or grafted with the choicer varieties of Apples, the consequences of which are disastrous to the future healthy development of the trees. F. E. T.

PEACHES.

TREES that are bearing heavy crops should have bountiful supplies of water, both clear and as liquid manure, to assist the fruits to swell to a good size. The foliage, too, must be kept free from insect pests by the frequent use of the syringe on bright afternoons till once the fruits show signs of ripening, when syringing should cease. If not already done, finally thin the crops of late kinds, leaving only just the number of fruits required to mature. I am greatly in favour of thinning both Peaches and Nectarines before the stoning process, so as not to overtax the trees at that critical period. The number of fruits left to ripen should be regulated according to the size of the variety and the strength and growth of the trees. Attend carefully to all fresh growths, keeping them neatly secured to the walls or trellises, and if more shoots have been left than will be wanted for next year's crop, thin them out so that the remaining ones may have all the chance possible to grow into sturdy, fruitful wood. Although a goodly number of young shoots may have been removed at the time of disbudding, there are generally others that can be spared as the growths extend, and which, if left, will have to be pruned away in winter. Overcrowding of young wood is most detrimental, and should never be allowed by those who have the trees under their care. The early American varieties are among the first to ripen outside, but if left on the trees too long the flesh becomes woolly and tasteless. They should be gathered with great care a few days before they are ripe, and be taken to the fruit-room or some other dry, airy place to finish, the fruits then being very passable. The midseason kinds—Royal George, Dymond, Stirling Castle, Bellegarde, Noblesse and others—are always excellent, but very late kinds require a good position to bring the fruits to perfection, and in the colder parts they probably would fail to ripen. With us Sea Eagle succeeds well, also the Nectarine Peach and Princess of Wales when the autumn is dry and warm. If carefully looked after, Peaches may be grown outside with every success, and I think they are fully as profitable as any other fruit. All fruits to be sent a long distance must be gathered when perfectly dry and under-ripe, and should be packed carefully in some soft material. I use wood-wool, and am well satisfied with the way they travel and arrive at their destination. The fruits are first placed in soft tissue paper, and then embedded in the material mentioned tight enough to keep them from shaking in the boxes. The boxes are then tied with string and labelled in red ink "Fruit.—With care."

Wrotham Park, Barnet.

H. MARKHAM.

A GOOD CROP OF PEACHES AND NECTARINES.

I AM sending you a photograph of a Peach-house here containing two large trees, viz., Nectarine Pineapple and Peach Bellegarde, each carrying over two hundred fruits. J. FRENCH.

The Gardens, Lower Hare Park, Newmarket.



A VIEW IN THE PEACH-HOUSE AT LOWER HARE PARK, NEWMARKET.

be ample to select from where late Peas of the best possible quality are required. G. WYTHES.

THE FRUIT GARDEN.

APPLE MILDEW AND ITS TREATMENT.

AMONG the many fungoid diseases which fruit-growers have to contend with, that of the Apple mildew (*Podosphaera leucotricha*) is of increasing importance. During the past few years it has assumed an almost epidemic form in many fruit-growing districts of this country. Where trees are persistently attacked by this mildew, the growth of the young shoots becomes stunted, and in some cases they are completely killed. The blossoms are also liable to infection, and when this happens there is little prospect of the ultimate production of fruit.

Allington Pippin and Cox's Orange Pippin are most liable to become badly affected throughout the fruit-growing districts of Cambridgeshire.

The dissemination of the disease is no doubt due to the profusion of conidial spores which are produced on the young shoots. These summer spores are readily dispersed by the wind and other agencies on to neighbouring trees; consequently there is ever an increasing area of infection unless preventive measures are adopted. Occasionally spraying the trees while the disease is active with a solution of sulphide of potassium will be found most effective in checking its rapid increase.

As the mycelium of this fungus is also believed to be present in the bark of the affected shoots, fruit-growers should adopt the additional precaution of cutting back during the winter all young shoots which have been known to be affected. All such prunings should be burnt and not allowed to lie about on the land.

GARDENING FOR BEGINNERS.

TREATMENT OF RAMBLER ROSES AFTER FLOWERING.

AT this season, when most of the Rambler Roses have finished flowering, there is some important work that requires attention if we are to get the best from our plants next year. Slowly but surely the novice in gardening is taking up the cultivation of the many beautiful hybrids of the Japanese Rosa wichuraiana, and there are not many gardens in the country where such varieties as Dorothy Perkins and Hiawatha do not find a home. Their rapid growth and free-flowering characters render them particularly suitable for growing over arches, pergolas, or on rustic trellis fencing, and gardens of the present day owe not a little of their beauty to the judicious use of Rambler Roses.

If we examine our plants now, we shall, or we ought to, find a number of strong, wand-like shoots that have been formed during the present summer. These, in many instances, notably Crimson Rambler, emanate from the base; but in some cases, and particularly in Dorothy Perkins, they may be found coming from the older wood some distance from the ground. But no matter whence they spring, these are the growths that we want to look after, as it is upon these that we shall secure our best flowers next year. What we want to do now is to give these young growths every opportunity to become well ripened before the winter, and with this end in view any old, useless wood that may be present should be removed at once. It is difficult to describe the character of this old wood, but an inspection of a Rambler Rose, even by the merest novice, will reveal branches that it is evident have done their best, and which may well be superseded by the younger ones. After cutting these out, the young shoots that we wish to retain should be tied up loosely, just so as to prevent them getting damaged.

If tied in closely to the supports, sun and air do not reach them so freely. Green fly is often present in the tips of the young shoots, and where this is so it must be removed by spraying, or, better still, dipping them in some good insecticide.

With large-flowered Rambler Roses such drastic pruning cannot now be adopted, but even in these varieties no harm, but rather a great deal of good, will be done by cutting out old wood that is obviously past its best. The use of these larger-flowered, semi-climbing Roses for pillars and arches is now largely adopted by those who like them for cutting, and the accompanying illustration of the old variety Homère shows that they are capable of producing very pretty effects in the garden. This arch is in the Vicarage garden at Shalford, a little village about five miles from Braintree in Essex. Here the Rev. A. Law grows Roses and Sweet

Peas in profusion, and when we had the pleasure of seeing his garden one day in June it was filled with the delightful fragrance of these two flowers.

MIGNONETTE FOR THE WINTER.

This deliciously fragrant flower is admired by everyone, whether it be in the open ground or in the greenhouse. When the autumn frosts have cut off our supply out of doors, a few pots under

sturdy growth must be encouraged. In autumn, before the nights get too cold or the rainfall too heavy, the pots must be taken into the greenhouse and given a good light position therein. In this way the plants will flower when the fragrant blossoms are most appreciated. H. P.

SUCKERS ON FRUIT TREES.

If a comparatively young fruit tree throws up a single sucker from its roots and the cultivator is content to simply pull off that sucker, more will soon grow. I have seen many scores of trees treated in this way, and in a few years' time the ground under them was fairly well covered with young sucker shoots. It is a very difficult matter to clear the main roots of these growths when the latter have been left for so long a time undisturbed except the annual removal of their tops. I strongly advise inexperienced cultivators to forthwith remove all suckers as soon as they are seen. Merely breaking them away at the soil-level will not do; the soil must be carefully removed right down to the main root of the tree from which the sucker grows, and then the latter must be cleanly cut away with a small portion of the root attached to it. There is not much labour entailed in the removal of one or two suckers from each tree, but a great deal if neglected for several years. The cut part of the root from which the sucker is taken may be notched with a sharp knife; then many fibrous roots will grow from it. Avon.



A BEAUTIFUL ROSE ARCH IN A VICARAGE GARDEN IN ESSEX.

glass are doubly welcome, and in order to obtain these, seeds should be sown now. Pots 5 inches in diameter are very suitable for the purpose. They should be quite clean and effectually drained. A suitable compost for Mignonette should consist mainly of good loam of a fairly holding nature, lightened by a little old broken mortar rubble and silver sand. It is necessary that the soil be pressed down very firmly, as this ensures good stocky growth. The seeds must be sown thinly, and when sufficiently advanced, so that the best can be selected, the seedlings must be thinned out, ultimately leaving from three to five plants in a pot. The seeds will germinate well outside, the main thing being to see that the soil does not get saturated in the event of heavy rains, as an excess of water is very injurious to Mignonette in any stage of pot culture. In every way good,

and hoaxed until it is time to clear the flower-beds generally, and then they do not form new roots freely, as the dull, cold days have come. Hundreds of plants damp off wholesale in the depth of winter. In August the number of plants required should be selected and all flowers cut off. In a fortnight's time young shoots will again grow; then lift the plants carefully with earth attached to the roots and plant them in boxes which are 4 inches deep and large enough to contain one dozen or two dozen plants when put in 4 inches apart each way. Use a nice gritty compost and give water directly the plants are put in, but be careful not to over-water afterwards. Keep the boxes in a cool frame very freely ventilated. Guard against damp and frost through the late autumn and winter. A shelf in a warm greenhouse is an ideal place for them. In spring cuttings will be plentiful. B.

PREPARING LOBELIA PLANTS FOR WINTER.

WHERE it is intended to winter plants instead of rooting cuttings, the former must be duly prepared, else they will die during the winter months. The reason why so much Lobelia is lost in winter is because the plants are not lifted

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Bedding Plants.—These should by this date be at their best, and between now and the end of the month a supply of cuttings should be obtained for propagation and next year's requirements. A few early cuttings of Geraniums can be obtained without disfiguring the beds if a little care is exercised. Select well-ripened shoots. They will root easily, and may be transferred to frames towards the end of next month. The lesser-growing and more tender subjects, such as Lobelias, Heliotropes, Iresines and Alternantheras, will be best inserted in pots a little later, when I hope to refer to them.

Pansies.—Seeds of these may now be sown in boxes or pans of a suitable size, filled with a sandy open compost of fine soil, stood in a cold frame and kept shaded until germination takes place. As soon as the seedlings are large enough, prick them out into beds or borders, having first well prepared the ground and broken the surface down to a fine tilth. Keep the young plants watered as necessary, and the soil around them frequently stirred with the Dutch hoe.

The Rock Garden.

Taking Cuttings.—The present month is the best time for increasing by means of cuttings many of the shrubs of dwarf habit so eminently suited to the rock garden. Select young growths, firmly insert them in a bed of fine sandy soil in a frame or pots filled with a similar compost, and keep them shaded from bright sun and watered and damped as necessary.

Shrubs for Rock Garden.—A few that may be increased in this manner are the Cistuses in variety, also Helianthemums, Olearia macrodonta, O. stellulata and O. myrsinoides, Hypericum empetriforme, H. undulatum, H. olympicum, Cotoneaster humifusa, Caryopteris Mastacanthus, Perowskia atriplicifolia, Santolina Chamæcyparissus, Othonnopsis cheirifolia (of sub-shrubby habit) and several varieties of Ceanothus.

Daphne Cneorum, the most beautiful of all the Daphnes, is best increased by layering, as are also the smaller-growing Berberises, such as B. Fremontii.

Taking Offsets.—To have a few reserve plants in case of any injury happening to those planted out, many of the Saxifrages, Sedums and Sempervivums may be propagated by potting up a few offsets in a compost of loamy soil, made porous by the addition of some coarse grit or lime rubble, and stood or plunged in ashes in an open frame, lightly shading for a few days from bright sunshine. Well water in, and afterwards damp over with a fine-rosed can and expose to plenty of air and sunlight.

Fruits Under Glass.

Peaches.—Earliest-forced Peaches and Nectarines in pots will be much benefited by removing them out of doors to a fairly sheltered spot, so that the wood may become thoroughly matured. Make well secure against winds, and keep the plants supplied with water and vigorous syringings of the foliage to maintain it in a healthy condition. The same remarks apply equally to pot Figs.

Figs.—Late Figs in pots must be kept well supplied with water at the roots, and will need considerable supplies of nourishment to assist them to fruit. The growths must be stopped and thinned, especially weak shoots, and those with large foliage particularly must not be allowed to become overcrowded. Young plants that were raised from cuttings this season should have every inducement given them to make nice plants.

Autumn-fruiting Strawberries.—These are well worth cultivating in pots for supplying dishes of exquisitely-flavoured fruit in the autumn. Until the plants are required indoors, the surroundings should be kept moist by frequent dampings, the plants kept well supplied with water and some stimulant occasionally given. The flower-trusses should be removed as they begin to set until required, also any runners and decayed leaves. If the soil on the surface becomes hard, aerate with a pointed stick. St. Antoine de Padoue is the best variety with which I am acquainted.

Plants Under Glass.

Winter-flowering Carnations.—The young plants, whether growing in pits, houses or stood out of doors, must not be neglected, and attention must be regularly paid to the staking and tying of the growths. The latter I prefer to loop up singly with neat twisted strands of raffia. Give a sprinkling of Carnation manure when rooting freely, and vary other stimulants once a week. It is well to have the plants so that protection can be given them from heavy rains; but on warm days towards evening the plants appreciate a dewing over of the foliage and a good damping down of their surroundings.

The Orchid-Houses.

Ventilating.—Throughout the summer months the majority of the occupants will benefit by a free circulation of air, and, of course, the cooler-growing section can hardly be overdone, combined with heavy shading, which should be removed, however, when the sun has gone off the house. Plenty of damping of the floors and moistening the stages and between the pots will be beneficial, as will also sprayings overhead, especially to Odontoglossums. Plants that are growing freely will in most cases take plenty of water at the roots, and those growing in baskets or perforated pans should be immersed in a pail of water.

The Shrubberies.

Buddleia variabilis.—This shrub is now making a fine display. As the name implies, there is considerable variation both in the size and colour of the flower-trusses and also the time of flowering. They are quite hardy, free growers and ought to be included in all collections. The plants may be propagated by cuttings of the young shoots or division of the roots in winter.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Narcissus.—If at all possible, new plantations of Narcissus should be made without delay. In naturally dry soils a fair proportion of rotted manure should be deeply incorporated with the soil and, after planting, a layer of the same material and soot may be spread over the entire surface. It becomes well mixed by means of the hoe, which will occasionally be needed to surface-stir the beds to kill seedling weeds.

Colchicums.—These, too, should be transplanted if not already done. Perhaps the finest of the autumnal species is speciosum album. The plants make growth subsequent to flowering, which those unacquainted with this habit should note.

Belladonna Lily.—Clean all weeds from about established plants and stir the surface soil round about them. If the soil is dry, which it usually is when the plants are established near the base of sunny walls, a soaking of water should be applied, which will enable the flower-spikes to come all the stronger.

The Rock Garden.

Crocuses.—If any autumn-flowering kinds are to be planted, it should be done at once. Speciosum, which is an exceedingly lovely and inexpensive kind, flowers in September, so that there is not much time to delay. They are best when established under some low-growing creeping alpine plants, such as Saxifrages or Hutchinsia alpina. The common Saffron Crocus is also lovely, but is apt to die out or to abstain from flowering.

Dianthus.—Some of the earlier-flowering kinds will be seeding, and, unless seeds are wanted, it will conduce considerably to the appearance of the rockery to remove the stems. This is easiest done where the clumps are extended by means of a pair of sheep-shears or small, very sharp hedge-shears. Cuttings of some of the Mule Pinks will strike root if not allowed to ever get dry till rooted.

Campanulas.—The rather rough-habited turbinata and carpatica and varieties are apt to overstep the limits when in flower. The effects of this tendency are easily counteracted by pulling away pieces from underneath the plants, the upper portions meanwhile falling down but covering less space.

The Fruit Garden.

Removing Sprays.—It is usual for Pears, Plums, and Apples to produce weakly growths from the cut-backs of the summer pruning. These are of no manner of use to the trees, and should be removed as opportunity presents itself, not cutting them, but removing them entirely. The sooner this is done, the easier they are to break off.

Apricots.—The earliest fruits of these will be ripe or ripening, but much depends on the weather. I have known it to be September before any ripe fruits could be gathered. For preserving, the fruits are better if not quite ripe. When fully ripe, the skins are not so easy to peel clean. Where birds are preserved, it is imperative to place berringtons in front of the trees, and it may be added that the only way to circumvent wasps once they discover them is to pick the fruit at short intervals and before it is quite ripe, keeping it till ready in a cool fruit-room.

Peaches.—All the trees should be gone over and the new shoots laid in finally before the crops ripen. It is essential to expose the fruits to the light, and this more especially as regards late varieties. Some successful growers soak the borders with manure-water in order to increase the size of the fruits. There is always a danger of retarding the ripening of the wood where this practice is followed, but it indubitably is the means of the production of high-quality fruits.

Shrubs.

Deutzias.—The late-flowering varieties of the scabra section have been very fine, and now that the flowers are past, these shoots may be cut back to allow greater space for those of the present year, which will be the flowering shoots of next year. Prune so that flowers may be produced from the base of the plants instead of from the upper parts only, which they have a tendency to do unless corrected by judicious pruning.

Spiræas.—The good effect of hard pruning in spring will now be seen in the beautiful condition of the japonica and callosa sections, which are covered with bloom. The present is the best time to prune ariæfolia, which has just finished flowering. Very slight pruning is needed; merely a shoot here and there to ease the plants in places which are overcrowded with shoots. Lindleyana may also be seen to.

The Vegetable Garden.

Leeks.—If some soil be drawn up to the rows of the maincrop Leeks, it will serve to lengthen the part blanched, which by many is the only part used.

French Beans will be generally far enough advanced to necessitate the picking off of the too advanced pods, which are extremely hurtful to the cropping qualities of the plant if left to mature. Those for late cropping in frames should be thinned to at least 12 inches apart.

Lettuces and Endive.—Where these are in daily request, transplant at short intervals from the seedling lines in any ground as it becomes vacant. Lettuce does best in a well-worked friable soil. Endive is less exacting in its requirements, and a rather poor soil is to be preferred for it. In such it undergoes the exigencies of our winter climate better than if grown rankly.

The Plant-Houses.

Narcissus.—The potting and boxing of these bulbs should be finished forthwith. They succeed best in not too small pots, and in none do they ask for much drainage, the space which would be occupied therewith being more advantageously supplied with the roughest of the compost made rather firm.

Carnations.—Those border varieties which have been grown and flowered in pots should now be turned out and planted on a border and the grass layered. The rule invariably is that such layers provide the healthiest plants, and some kinds, e.g., Lady Hermione, can in some gardens be kept only by this treatment.

Schizanthus.—There is no special hurry to sow seeds, the main sowing being better deferred for some weeks. Those who do sow now will find the practice of sowing in small pots, afterwards thinning the seedlings to one in each pot, a very satisfactory way of starting these.

R. P. BROTHERSTON,

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Lysimachia Henryii.—A recent introduction from China, a plant of sterling merit and a useful addition to the genus. As a summer-flowering and free-flowering plant of low growth it will be welcomed by all hardy plant-lovers. Not more than 6 inches or 8 inches in height, the trailing or sub-erect branches are terminated by a cluster of clear yellow flowers arranged in a leafy setting. It is perhaps the only member of its race worthy of inclusion in the good rock garden, where it will be most at home in cool or moist places in a spongy soil. Several admirably-flowered examples were shown by Mr. M. Prichard, Christchurch, Hants.

Gladiolus Crown Jewel.—This is apparently a strong-growing variety of salmony pink colouring, with yellow blotch on the lower petal. From Messrs. J. Kelway and Son, Langport.

Begonia Decorator.—Judged by the drooping habit of its flowers, this variety should prove of considerable value for basket-work or for any position where a trailing plant is desired. The example shown was grown as a pyramid, and was highly attractive. The scarlet flowers are of medium size. Exhibited by Messrs. Cannell and Sons, Swanley.

Rhododendron Clorinda.—This is one of the javanico-jasminiflorum hybrids, and was raised from a cross between jasminiflorum carminatum and Minerva. The flowers, which are of a rich rose colour, shading to scarlet at the margins of the petals, are produced in a large and handsome truss. From Messrs. James Veitch and Sons, Limited, Chelsea.

Clethra arborea.—It may seem strange that any plant known to cultivators or botanists for something like a century and a-quarter should not have had its merits recognised long ago. Such, however, appears to be the case, the plant having been introduced in 1784 from Madeira. Usually cultivated in inland gardens as a greenhouse shrub, it is sufficiently hardy in the open in the South and South-West to warrant general cultivation in that way, and grows into a handsome, freely-flowered bush several feet in height. Thus seen it is a plant of ornament and beauty, the pure white fringed flowers depending from the under sides of the horizontally-disposed branches with great freedom. As a pot plant for the cool greenhouse or conservatory it is worthy of general notice. From Messrs. Stuart Low and Co., Enfield.

Eschscholtzia Mikado caniculata.—The most brilliant colour in Eschscholtzias we have seen, and a novelty of considerable merit. The colour is intense crimson scarlet, with more than a suspicion of orange infused therein. The petals are distinctly frilled or pleated, distinction being thus added to a brilliant flower. From Mr. W. H. Gardiner, Mill Street, St. Osyth.

Rose Danae.—A new Polyantha variety of distinction and merit. The colour tone is an approach to that of a pale Lady Hillingdon, the form of the flower being slightly cupped. Judging from the examples shown, the new-comer should prove an acquisition. Exhibited by the Rev. J. H. Pemberton, Havering-atte-Bower.

Astilbe simplicifolia.—A new species of dainty grace and elegance, and a miniature withal. Six inches or so high and of a spreading, tufted habit of growth, the hard-textured leaves are entire, 2 inches or more long, tapering to a needle-point,

and with copiously and acutely toothed margins. The minute blossoms are pure white, and are produced in a spray-like inflorescence which is disposed horizontally. It is quite an acquisition to hardy plants, and of undoubted hardiness. It is from Japan. Exhibited by Mr. G. Reuthe, Keston, Kent.

Hæmanthus Andromeda.—We have no information concerning the parentage of this showy form, which in general aspect approximates to a pale-coloured H. Katherinæ. The colour is pale orange scarlet. Several fine plants were shown, and all proportionately handsome in leaf and flower. Exhibited by Mr. Cory, St. Nicholas, Cardiff.

NEW POTATOES.

The following awards were made to new Potatoes as the result of trials held at Wisley: A first-class certificate was awarded to Messrs. Smith and Sons, 18, Market Street, Aberdeen, for the variety Whitehill Seedling. Awards of merit were granted to Messrs. Barr and Sons, Covent Garden, for Imperial Beauty; and to Mr. W. E. Sands, Hillsborough, County Down, Ireland, for the varieties Irish Gem and King George V.

The foregoing awards were made at the fortnightly meeting of the Royal Horticultural Society held on July 30.

CLIMBING ROSES IN AN ISLAND GARDEN.

SOME Roses trained on walls have grown and flowered profusely. Among the best are J. B. Clark. This Rose the writer has never seen in finer condition. The flowers were exceptionally large and the colour intense deep scarlet, with its shade of blackish crimson, and the petals carrying a rich bloom like a Plum. This Rose is growing on an east wall, but is sheltered from the full force of the east winds by another wall running parallel on the opposite side of a garden walk. American Pillar is now, at the time of writing, one mass of flowers, very healthy and producing strong young shoots. The Wallflower has flowered well, although not growing so strongly as one would like to see it. Climbing Kaiserin Augusta Victoria has produced an abundance of its immense flowers. Near to the latter is the pretty little Rose Fairy, a Polyantha Rose which is happily named, not a strong grower, but a perpetual bloomer. Its small white flowers, with yellow anthers, are very attractive. Mrs. F. W. Flight has produced an abundance of its bright pink semi-double flowers. Rubin has flowered freely for several weeks. The dark foliage of this variety adds much to its attractiveness. White Dorothy Perkins on an east wall is commencing to flower, but this variety, with its pink progenitor, is not so free-flowering here as one generally expects to see them. Blush Rambler is very good. Queen Alexandra is one of the best growers, although flowering somewhat sparsely. Una grows very vigorously, and is one of the best we have. Excelsa on a west wall grows and flowers freely. Mme. Alfred Carrière, planted this spring in an exposed position, has made some good strong shoots which look promising for a wealth of bloom next season. Varieties which have made abundance of healthy growth, but have not flowered as freely as one would like to see them, are Thalia, Goldfinch, Gloire de Dijon, Chesbunt Hybrid, Aglaia and Grüss an Teplitz. Bouquet

d'Or should be mentioned as the best early-flowering variety we have on a west wall. Among Climbing Hybrid Teas, in addition to Kaiserin Augusta Victoria, already mentioned, Climbing La France, Climbing Mrs. W. J. Grant and Climbing Caroline Testout are excellent. William Allen Richardson lost a good many shoots during the early spring. Dundee Rambler is not growing with its usual vigour. Possibly it may do so when it gets thoroughly established. The Garland and Jersey Beauty, planted this spring, are growing freely. Rêve d'Or is making only moderate growth in an exposed place, but where growing in a sheltered position it is very satisfactory. Crimson Rambler and Tausendschön are both badly affected by mildew and are not at all good here. The possible reason is that they do not get sufficient sun. China Roses in the borders are very healthy. Conspicuous for freedom of growth and flower is the variety Queen Mab. The Penzance Briars do not suffer to any extent from the violence of the strong south-westerly gales which are so frequently experienced.

COLIN RUSE.

Lambay Island, Rush, County Dublin.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

CARNATIONS NOT FLOWERING (Beatrice).—Failing a sight of the plants referred to, we can only suggest that the plants were either small or undeveloped specimens, or that, if of good size, the Carnation maggot has eaten out the hearts during winter. You might prove this or otherwise by a close inspection of the central parts of the plants. Their business, particularly if the growths be small, points to an attack of the maggot. The leaves may have fallen from the Rose because of extreme root dryness or a bad attack of red spider. Damp in a year like the present, the spring of which has been remarkably dry, is not likely to be the cause. We presume the plants have a fair depth of good soil, but you say nothing about this or the position they occupy, and either or both may have an important bearing on the point. The Gladioli would be far better lifted, rested and replanted, and will give more satisfactory results if so treated. Lift the early ones in August, and replant in October in a fresh spot. Take up the late-flowering sorts late in September or in October, store them in some dry, frost-proof place, and replant them in March. The early ones you could still mulch with impunity.

PLANTING NEWLY-MADE ROCK GARDEN (Veritas).—Without knowledge of the preparation made for the reception of the plants, it would be hazardous to give you a list for your somewhat extensive arrangement. So many things go to make success in such matters—environment, the average size of the pocket, space at the disposal of the planter and, not least, some knowledge of the plants themselves to ensure their rightful disposal. We will give you a list of plants with pleasure, but in so doing would like to feel that we were giving you the best for the purpose. In a rock garden of the extent named and of such varying height there should be room for a great variety of things—dwarf conifers, trailing shrubs and alpines—not of the expensive order, but of a type calculated to make it interesting over a prolonged period. As it is only just completed, there is no immediate occasion for planting it, and a few weeks hence, when the soil has settled down, would be better. Would you, therefore, in the meantime send a few further particulars, especially concerning the soil depth and the provision made for

the plants, with some idea of its width and its steepness or otherwise? The case is really one for advice on the spot, and an expert's fee might be saved many times over and much future disappointment avoided were this view adopted.

ARUM (A. K.).—The specimen you send is the common Dragon (*Dracunculus vulgaris*), also known as *Arum Dracunculus*. It is an interesting and curious plant, growing wild in South Europe. You may not think the flower very showy, but many people consider the plant worth growing for the foliage and mottled stems. *D. vulgaris* thrives in most soils, but prefers a rich, moist soil in a half-shady position. The plants are often associated with hardy Ferns. Propagation is effected by division of the roots in spring just when new growth is commencing.

PYRETHRUMS AND IRISES (W. W.).—Some good double-flowered Pyrethrums are *Ne Plus Ultra*, bluish pink; *Captain Nares* and *J. N. Twedy*, crimson; *Pericles*, yellowish; *Carl Vogt* and *Aphrodite*, pure white; *Queen Mary* (new), pale pink; *Auribundum plenum*, rose; and *Solfaterra*, pale primrose. Your enquiry concerning Irises in June is a little vague, as in that month the entire range of Flag or German Irises, and Spanish Irises, which are bulbous, are then in bloom. Apart from these there are a great variety of distinct forms. A good collection of Flag Irises should include *aurea*, golden; *Mme. Chereau*, violet and white; *Queen of May*, rosy lilac; *Dr. Bernice*, smoke and bronze; *palida*, and *p. dalmatica*, delightful shades of mauve; *Princess of Wales*, white; *atropurpurea*, dark purple; and *Mrs. Charles Darwin*, one of the best of the whites. All Irises are good for cutting, and if this selection does not meet your requirements, please give us a more definite idea of your needs. We cannot say which is the largest *Ranunculus*; everything depends on the size of the tuber and the cultivation afforded to individual plants or groups.

REMOVING PLANTS IN SEPTEMBER (H. A. S.).—Though such things as *Michaelmas Daisies*, and in a lesser degree the hardy *Fuchsia* and *Anemone*, would be in flower at the time, none of these would be inconvenienced greatly by the removal so far as future success is concerned. The better way to deal with them would be to lift the clumps, shake off a good deal of the soil, and pack closely in egg-boxes or anything of convenient size. Most of the plants will, if large, repay for dividing. The *Pæonies* must certainly not be replanted intact if big, unless failure is courted, while *Iris stylosa* should be freely divided and replanted in stony or gravelly soil, or that charged with old mortar refuse, in the hottest position you can command. In all the circumstances your better plan, seeing that the garden to which you are going is unoccupied, would be to obtain permission to enter and prepare in advance, and with permission to move the plants these could be lifted piecemeal. The overgrown shrubs will require some attention, but only a person on the spot could decide this. The sketch you submit appears to be a quite convenient one for the place, that is, so far as making the most of the ground is concerned, while the side borders might be devoted to herbaceous perennials, *Roses* and other flowers. The new garden should be thoroughly trenched and manured, and coarse weeds removed and burnt. "The Culture of Vegetables and Flowers," published at 5s. by Messrs. Sutton and Sons, Reading, should prove helpful to you, seeing that it treats of all-the-year-round gardening. Apart from this, the columns of THE GARDEN weekly contain much useful information concerning these and other departments of gardening. "Root and Stem Vegetables," by Alexander Dean, price 1s. 6d., should also prove of service. It may be had of the Publisher, 41, Wellington Street, Covent Garden, W.C.

TREES AND SHRUBS.

EUONYMUS (M. O. A.).—The *Euonymus* is attacked by a scale insect, a species of *Lecanium*. The brown scale protects numbers of pinkish eggs, and little can be done to destroy these; but watch should be kept, and as soon as the eggs hatch, the bush should be sprayed with paraffin emulsion or with a nicotine preparation. In the case of deciduous bushes, such as *Currants* and *Gooseberries*, a useful measure is spraying with an alkali wash in winter, but this must on no account be used on bushes which retain their leaves.

LAVENDER, ROSEMARY AND LEMON VERBENA (H. E. B.).—September is a good time to plant *Lavender* and *Rosemary*. Your treatment of the *Lemon Verbena* (*Lippia citriodora*) is that usually followed with success. Why a plant in apparently good health and favourable position should die for no evident reason puzzles the greatest horticultural experts at times, yet such a thing does happen in almost every garden from time to time. All we can suggest is to plant a young *Lemon Verbena* out again next spring, when probably you will be more successful. Plants against a wall sometimes get dry, even during showery weather, owing to rain heating the other way.

LILAC BUSHES UNSATISFACTORY (G. G. N.).—The exceptionally dry spring is, no doubt, the cause of your bushes failing after replanting, for though you may have provided plenty of water at the roots, overhead watering is necessary as well. It is advisable when replanting trees and shrubs of any size to reduce the growths to compensate somewhat the disturbing of the roots, which, naturally, take some little time to become established. Your best procedure now will be to cut down the bushes to one-third their height, mulch with some old decayed manure, water the roots during dry weather, and syringe or damp over the top morning and night to induce the production of young shoots from the wood.

ARBUTUS AND OTHER SHRUBS (R. S. D.).—Unless *Arbutus Unedo* is outgrowing its position, it requires no pruning. If you wish to reduce its size, cut it back in April. *Diplopappus chrysocephalus* may be cut back in March or April. *Perowskia atriplicifolia* may be pruned fairly hard in March. The dwarf kinds of *Philadelphus*, such as *P. Lemoini*, should have all flowering wood cut away as soon as the flowers are over. The tall-growing kinds require very little pruning. An occasional thinning out may be given after flowering. The late-flowering kinds of *Tamarix* may be cut back in spring; the early-flowering kinds after the flowers have faded. *Viburnum rhytidophyllum* requires very little pruning. If the branches are becoming ragged, however, they may be topped any time during late spring or early summer. *Weigelas* may be thinned out as soon as the flowers are over. Thinning is not required every year, and when it is done it should take the form of removing the older branches. Two of the best deciduous *Barberries* are *Berberis vulgaris* and *B. Thunbergii*. The two best evergreen kinds are *B. stenophylla* and *B. Darwini*. Two of the best dark red *Lilacs* are *Charles X.* and *Souvenir de Louis Spaeth*. Two good white ones are *Syringa vulgaris alba grandiflora* and *Marie Lecraye*. A good tall-growing *Philadelphus* is *P. grandiflorus* variety *floribundus*.

THE GREENHOUSE.

CARNATIONS (T. B.).—The three classes of Carnations concerning which you enquire are propagated in different ways—the *Perpetual-flowering* by cuttings in the early part of the year, the *border varieties* by layering in the open ground as soon as the flowers are past, and the *Malmaisons* by layering under glass in the month of July.

FERN-HOUSE AND FLOWERS (K. Q.).—An exceedingly difficult question, and possibly you may think our answer a disappointing one, for we do not really know of any flowers good for cutting that may be grown in the interstices of the walls of a Fern-house. The atmospheric moisture suitable for the Ferns would also be beneficial to the red and white *Lapagerias*, and you might perhaps with advantage train them to the roof. In the warmer house, pretty foliage subjects, such as *Begonias*, *Panicum variegatum*, *Pittonias*, *Episcia fulvida* and others of this class, may be grown, but the flowers are of minor account, and in no case are they available for cutting.

PRIMULAS (B. S. R.).—*Primula cockburniana* generally succumbs after flowering, because it is only a biennial. It seeds freely. Seed should be sown soon after it is ripe; then a good stock is kept up. Although *Primula japonica* hybrids are usually classed as perennials, the finest display is procured by growing on a stock of young plants. When the plants get old and have flowered profusely, they often decay at the base instead of forming fresh crowns, especially when we get a lot of rain immediately after. Another cause is too rich a soil or planting them too deeply. One piece you sent would have probably grown if it had been potted up and kept shaded in a close frame for a few weeks. Regarding those left in the ground, we should take up those affected, divide into single crowns, and lightly dust the base with lime or powdered charcoal. Place each crown in a small pot and, when established, plant out in a fresh piece of ground. You will probably lose some, but as *P. japonica* produces seed in abundance, we should certainly save some from the best varieties and sow it as soon as ripe, when germination takes place in a short time. In two years you would have very strong-flowering specimens.

VARIOUS QUERIES (C. B. A.).—The three *Begonias*, namely, *Gloire de Sceaux*, *corallina* and *President Carnot*, will all conform to the same mode of treatment. They can be readily struck from cuttings of the young growing shoots taken during the spring months, inserted into pots of light, sandy soil, and placed in a close propagating-case with a gentle bottom-heat. It is, however, now too late to think of propagating from your old plants this season, but they may now be re-potted. A mixture of two-thirds of loam to one-third of leaf-mould and a good sprinkling of silver sand will suit them well. As much of the old soil as possible should be removed when re-potting, and care must be taken not to use pots too large. Although these *Begonias* will, during summer, thrive in the greenhouse, they will be all the better, if you have a structure available, in the temperature of an intermediate house. In order to induce them to flower during the winter, the temperature of the house in which they are grown should at that season not be allowed to fall below 50°, and it may run up 10° to 15° during the day. The *Gesneras* which are resting should be started into growth without delay. To do this they may be shaken quite clear of the old soil and re-potted in small pots in a mixture of equal parts of loam and leaf-mould, with a liberal sprinkling of silver sand. After this they need to be placed in a fairly snug structure kept at a temperature above that of an ordinary greenhouse. Care must be taken not to overwater till growth commences, when more can be given. In the autumn they require a good light position in a house where a temperature of 55° to 70° is maintained. They will need to be shaded till the sun loses power, and at no time should the rich velvety leaves be syringed. As soon as the plants are sufficiently advanced, they must be shifted from the small pots in which they were started into larger ones, 5-inch pots being very suitable for this shift. If you wish your *Perpetual-flowering Carnations* to flower during the winter months, it will not be a satisfactory arrangement to grow them and the *Malmaison* varieties together. The members of the *Malmaison* group should, during the winter, be kept as cool as possible consistent with their being quite safe from frost. A minimum night temperature of 45° in mild weather, or a little higher

during severe frost, will be very favourable to *Malmaison Carnations*; whereas, in order to obtain flowers of the *Perpetual-flowering* varieties, the house must be kept nearly ten degrees warmer. You might obtain fairly good results by maintaining a temperature between the two. The plants will not require shading. Something might be done by placing the *Malmaisons* at the coolest end of the house.

ROSE GARDEN.

INJURY TO ROSE FOLIAGE (Blanche Branston).—The foliage you send has been injured by the *Rose slug-worm*. If you examine some of the leaves, you will find a small greenish-looking maggot on the under side of the foliage. It can easily be killed by spraying with nicotine wash or *Hellebore* wash. We have given a recipe for both in a recent number of THE GARDEN. It would be well to have the surface-soil removed to a depth of about an inch next winter, and either bury it deeply or burn it.

ROSE FOLIAGE BLIGHTED (Sir P. G.).—The fungus attacking your *Roses* is that known as *red rust* or *orange fungus*. Very few of the *Hybrid Perpetual* *Roses* escape this fungus, especially at this time of the year, and we do not think you need be alarmed about it, as it is often disseminated from the wild *Roses*; but it would be well to spray the trees with *Bordeaux* mixture at once. Remove the worst leaves and burn them, and in winter collect all fallen leaves and also burn them.

BASIC SLAG TO ESTABLISHED ROSES (E. K. B.).—This excellent fertiliser is very beneficial to established *Roses*. It is very slow in its action, so needs to be applied in the autumn. A dressing at the rate of 6oz. per square yard of surface would be about right. This should be forked or hoed into the soil, and may be applied at the same time as the annual dressing of farmyard manure. Try to secure some of the best manure you can from a farm where cows and pigs are constantly treading it about. This is far better than the strawy material that too often passes muster as manure.

KITCHEN GARDEN.

BLACK CATERPILLARS DESTROYING ASPARAGUS (L. L.).—Spray the foliage of your *Asparagus* with the wash given below, and you will find the caterpillars will disappear. If they do not after one application, they will after two. The wash should be applied in a fine spray with the syringe or garden pump, and at once. *Asparagus* is now out of season, and you should cease cutting, or the plants will suffer injury another year. In spraying, see that every part of the plant is well wetted. Arsenate of soda (dry), 2oz.; acetate of lead, 7oz.; water, 10 gallons. Dissolve together in water and well stir, adding 1lb. of treacle.

FRUIT GARDEN.

PEACH FRUIT DROPPING (E. Hopkins).—The cause of the fruit dropping is, no doubt, the defective stoning of the fruit of which you speak. It is a malady of the Peach termed "stone-splitting" or "rotting." This is generally attributed to the defective fertilisation of the blossom when the tree is in bloom. Next year be careful to fertilise every blossom on your tree, and that with pollen from other trees in bloom at the time, if possible; if not, with the tree's own pollen.

INJURY TO FRUIT TREES (Barnside).—Many gardens have suffered greatly this spring from late frosts, drying winds and long spells without rain, with the result that the tender foliage of Apples has suffered severely. This is sometimes seen in spots, brown or reddish, on the leaf, sometimes in the margin of the leaves becoming affected, often in the whole leaf being browned and "burnt." Apples with tender foliage, like *Cox's Orange Pippin* and similar varieties, are usually the first to suffer, and suffer most severely. Spraying with half-strength *Bordeaux* mixture will help to protect the foliage, even when weakened by bad weather conditions, from attacks by fungi, for some common fungi, like *Cladosporium herbarum*, are apt to attack such weakened leaves; but unless shelter can be given, in certain seasons *Cox's Orange* and similar Apples are almost certain to suffer.

GRAPES MILDEWED (Mrs. L. L.).—There is no manner of doubt as to what your *Grapes* and *Vines* are suffering from, namely, a severe attack of mildew. The cause of the attack, no doubt, is due to the prevalence of so much cold and wet weather, and especially to the night temperature ranging so low. Had a little fire-heat been applied to the pipes at night on the occasions of cold and wet nights, the probability is that the *Vines* would have been saved from attack. Next year you must try to bear this in mind. It is only a very little heat which is required, just enough to slightly warm the pipes, in order to create a movement and circulation of air. With this small amount of heat at night in cold, wet weather, a very little air must be admitted back and front, so that a circulation of air is maintained. Two of the bunches sent are so badly affected as to be useless, and should be burnt; but there is one which we should leave, and all others like it, as they may yet develop into useful *Grapes*. After all the badly-affected bunches are cut off, dredge those remaining thickly with flowers of sulphur (all the *Vine* leaves as well), let the sulphur remain on for thirty-six hours, shading the house slightly during this time, and then syringe the sulphur off with clear rain-water only. If the dredging is effectually done, the mildew will be killed, and as a consequence the *Vines* will greatly improve in health.

THE GARDEN.

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AUGUST 17, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The Nut Crop in Kent.—We understand that the Nut crop in Kent this season is the heaviest that has been known for a great many years. Contract prices that are now being arranged are very much lower than usual; but it remains to be seen whether the consumer will obtain Kentish Cobs and Filberts much cheaper than in past years.

Snapdragons and the Rock Garden.—The value of Antirrhinums as plants for the rock garden does not appear to be sufficiently recognised. In the beautiful gardens of Sir Herbert Leon, Bart., at Bletchley Park there is at the present time a low rock garden planted throughout with dwarf Antirrhinums, chiefly in yellow and orange tones of colour. This novel rock garden, though simple in design, is very pleasing, and for harmonious blending of colour it would be hard to excel.

Pea Disease in France.—Those who have lost Sweet Peas in this country by the attacks of the fungus *Thielavia basicola* will be interested to learn that it has created great havoc among culinary Peas in France this year. In one centre the crop has been practically exterminated. Although it attacks culinary Peas in this country, they do not appear to be so generally affected as Sweet Peas. It is a pest for which some of our scientists would do well to give us an easily-applied and reliable remedy.

Mimulus Burnetii.—The hardy *Mimulus* appear to be enjoying the wet season, and among them the pretty *Mimulus Burnetii* has been, and is still, very good indeed. It is a hybrid between *M. luteus* and *M. cupreus*, and partakes of the characters of both parents. It has all the hardness of *M. luteus*, with much of the colour of *M. cupreus* and a slightly taller habit than that species. It was raised by Dr. Burnet of Aberdeen. It is perfectly hardy, but dislikes drought, and may be lost in a very dry soil unless kept supplied with moisture.

The Indian Rice.—There are few more decorative water-side plants than this, for it grows to a height of 8 feet or 10 feet, has long, graceful leaves and good-sized, plume-like inflorescences, which are showy for a period of several weeks. Moreover, the plant commands attention by reason of its distinct appearance from the time the foliage is well developed about the end of June until the seeds are ripe towards the end of September. The Indian Rice is known to scientists as *Zizania aquatica*, the common name having arisen on account of the North American Indians using the Rice-like seeds for food. The difficulty of importing seeds in a fertile condition led to its cultivation being dropped in this country for many years. It can, however, be obtained now, and when once grown it need not be lost, providing the necessary care is taken in the collection and preservation

of the seeds. These must be collected when ripe, and either be tied in a piece of canvas and sunk in water or be placed in a vessel of water for the winter. In the latter case the water must be changed once or twice a week. Early in March the seeds must be sown in pots of loamy soil and be stood in water indoors to germinate. Grow in pots, in water, until May; then plant out permanently.

Campanula waldsteiniana.—As one of the most beautiful of alpine Bellflowers this appears almost the last word, and it is certainly one of the most desirable, if at times also a little capricious. The plant is 4 inches or so high; the greyish entire notched leaves, acutely pointed, are about an inch in length. The corollas, which on the stronger stems cluster to the extent of a dozen occasionally, are erect and of a distinct reddish violaceous blue, which, with the conspicuously white-tipped stigma of the early hours of expansion, give the plant a peculiar charm of its own. If given a rather free root-run in a crevice in grit and loam, it will not fail to please. It comes from Hungary.

The Cobweb Plant.—It is doubtful whether the best use is made of this easily-grown alpine, *Sempervivum arachnoideum*. Too often the species and its varieties are seen in clustered masses, which afford but little room for the development of the individual rosettes, and it is just this lack of development which makes all the difference between success and failure. By isolating the rosettes—by pricking them out an inch or so apart—a good opportunity is afforded for full development, and larger and more characteristic groups are the result. In gritty soil or loam and old mortar the plant does well. It is alike good for vertical or horizontal fissures in rockwork, its downy leaves being very attractive.

The Transvaal Daisy.—An interesting and attractive feature is provided at Kew at the present time by a border of this showy South African Composite, *Gerbera Jamesonii*. The border in question is situated at the foot of a wall on the south side of a range of glass-houses, and is thus well drained and warm. That it is peculiarly suited to the plants is evident from their luxurious growth and free-flowering character, and people who are desirous of trying the plant could not do better than copy as nearly as possible the conditions which exist at Kew. On its introduction G. Jamesonii impressed horticulturists favourably with its showy flowers, yet a considerable time elapsed before its cultural requirements came to be fully understood. The hybrids raised from it by Mr. Lynch of Cambridge a few years ago perhaps did more than anything else to popularise it, and both type and hybrids are now to be found in many gardens. Not only as border plants are the *Gerberas* valuable, but few subjects are more charming for cutting for house decoration.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Pruning the French Honeysuckle.—Mr. S. Arnott, whose note on this subject appeared on page 387, August 3, points out that he meant *Hedysarum multijugum* and not *H. coronarium*. This name was originally given in his copy, and was inadvertently deleted to make the paragraph fit in the page.

Exhibiting Carnations.—At the National Carnation Show held on July 23 last, the following remark was made in my hearing by one lady to another about some exhibits of dressed fancy flowers: "Oh, they are no criteria to go by; they don't grow like that." And they passed on to notice those without the "trimmings."—C. TURNER, *Highgate*.

Roses with Bad Habits.—I won the medal for the best Hybrid Tea Rose at the National Rose Society's show at Ulverston in 1911, the autumn show in 1911 and the Botanic Show in 1912 with *Horace Vernet*, which "P." includes in his article on "Roses with Bad Habits." These blooms were all from cut-backs, one of them a five year old plant. I find *Horace Vernet* one of the best as a cut-back.—G. SPEIGHT, *Market Harborough*.

Rose J. B. Clark.—Having read "P.'s" note about this Rose on page 379, may I recount our experience with this variety, which we have had four or five years. The first two seasons it made tremendously long and strong growths, yielding scarcely any flowers. Then we took up the plant and replanted it in another bed at the other side of the Rose garden, where the position was not quite so good. Before it was replanted its roots were rather severely cut back, the top very little, while a couple of the longest shoots were kept intact and arched over to the nearest plant. Since then we have had no trouble with it not flowering. Last year and this year it has done well. Wherever this variety is making too much top and producing little or no bloom, I would recommend replanting, root-pruning and arching of long shoots as a remedy.—C. T.

Matthiola bicornis.—It is no good, Mr. Editor, I have to write. My nose has been enjoying the delicious perfume of *Matthiola bicornis*, and it says that there may be a whole lot of noses that have never smelt it; in fact, it suggests that they do not even know what sort of a thing it is. Well, it is something very cheap, which, to begin with, is a good thing. It is also something very easily grown; as a big Tulip-grower said to me this spring of Prince of Austria, it is an "any fool's plant." There is no difficulty about it. Put the seed on the ground, lightly rake it in, and Nature does the rest. I bought sixpennyworth this spring, and about mid-May, when all the foliage had died down, I sowed it all over my two blue beds of *Chionodoxas* and *Muscari*. Each is 18 feet long by 5 feet wide. It was ample to cover them entirely, and now every evening and all night long they are a mass of pale shades of purple and mauve, and a veritable active volcano of the most delicious perfume. Many an idle moment in the past fortnight have I spent in gratifying my olfactory organ, and there seems every prospect of many more being spent in a similar way.—JOSEPH JACOB. [We agree with all Mr. Jacob has written about this plant. We have also been enjoying its fragrance for weeks past.—ED.]

Early Chrysanthemums in South-West Scotland.—Among the effects of a peculiar summer such as that of 1912 has been that of dwarfing early Chrysanthemums in the South-West of Scotland, and, for that matter, other districts as well. After seeing a good many gardens where these favourite flowers are grown, and grown well, one is surprised to find how general is the dwarfed character the early Chrysanthemums have assumed this season. In a dry season, such as that of 1911, the effects of high culture were quite apparent, as the plants on well-manured soil were infinitely better than on poorly-cultivated land. This year, however, the free application of manure and the most liberal treatment have failed to form really fine plants, and many varieties which in normal years are among the tallest are this year far below the height of those of medium stature in other seasons. Rather curiously, also, old plants left in the ground which survived the winter are much more vigorous than young ones raised from cuttings as usual.—S. ARNOTT.

Judges Judged.—I am asked to express an opinion as to "whether judges of exhibits at a show may act contrary to the published rules of the society by which competition is invited." My reply to that question must be in the negative. A judge must act strictly within the *wording* of the schedule. See Paragraph 10 of the Royal Horticultural Society's "Rules for Judges," sixth edition, 1908, in which the governing term is set in italics as above for emphasis. In case of doubt, the rule goes on to say that judges should appeal to the show authorities on the question of awarding or withdrawing prizes. I did not see the Sweet Pea contest about which such differences of opinion have arisen, but after over forty years' experience in judging, I am satisfied that Mr. Jenkins is right that the judges had no power to go beyond disqualification; but—for there is a "but" in the case—the same rule of the Royal Horticultural Society above cited goes on to say that though the judges may be forced to disqualify, they may *recommend* the authorities to entertain certain proposals for meeting the case. If this was done and official sanction obtained, it would seem that the result, right or wrong, must stand, though if "A. B. Essex" is accurate in his statement regarding the "breaking of a plainly printed rule," the verdict would be *ultra vires* (beyond one's power or rights), and therefore should be quashed. It is not easy to discuss a case briefly in the absence of relative cognate facts, and as there are numbers of men of my name engaged in gardening whom I have no wish to involve in a controversy, my identity will be sufficiently clear as—JOHN WRIGHT, *V.M.H.*

—The schedule of a flower show I look upon much in the same light as the captain of a vessel looks upon his chart. It is an instrument carefully prepared (or should be) for the guidance of the committee of management, laid down by its responsible officers, but it is equally a guide, and as binding on the exhibitors and judges. Why, I have known important exhibits of fruit disqualified simply because a trivial mistake had been made of adding one more Peach or Nectarine to a dish than the number stipulated in the schedule. The schedules are studied intently and earnestly for months beforehand by exhibitors, and elaborate care is taken to conform to the letter to the conditions laid down, and any judge, in my opinion, who acts knowingly in contravention of the rules and conditions so laid down in the schedule for exhibitors to work to offends not only against the

exhibitor, but against the authors of the schedule, the managers of the show. If this were persisted in, the same end would come to the show as in the case of a vessel the captain of which disregarded his chart. The principle applies with the same force to exhibitors if they make a mistake of wrongly interpreting the schedule.—OWEN THOMAS.

—In my opinion the rules made by a committee are equally as binding on the judges as on the exhibitors, and no judge should act contrary to the published rules in the schedule.—S. T. WRIGHT, *Wisley*.

—The question of judges acting independently of, or contrary to, the rules as printed in the schedule of any society is certainly an ultra measure for any judges to take, and if allowed by any society would very soon land it in litigation. The rules printed in the schedule of any society are simply the conditions by which both exhibitors and judges are to be governed in their connections with the society, even if, as is sometimes the case, they are palpably wrong.—J. JAGUES.

—The Editor is good enough to ask me if I would care to express an opinion on this point. I should. I repeat what I said emphatically at the show—that the judges were bound by the schedule, and had no right to do anything with an exhibit containing double standards but to disqualify it. I noticed that in some classes prizes were given after a disqualification, and was told that the reason was that all the competitors were equally culpable. Now, I hate this double-standard rule virulently, but I fail to see why one man should benefit by it while another loses. I agree with the views expressed by my brother, that judges, equally with exhibitors, are bound by the schedule. But, after all, the judges could only make a recommendation; it is the committee which accepted the recommendation which is at fault. I am at one with "A. B. Essex" as to this. I cannot say, however, that I am astonished. I have ceased to be surprised at anything done by the National Sweet Pea Society. I am utterly weary of its follies, and I have already sent in my resignation. The beautiful *coup d'aile* which we have always enjoyed so much at the show was ruined this year by the ugly backgrounds.—WALTER P. WRIGHT.

—In reference to this question, and without entering into the merits of double *versus* single Sweet Peas, I am in full accord with Mr. Wright and his contention in your issue of August 3, page 390, namely, that the rules of a society are *equally binding* on judges, exhibitors and the society that offers prizes, and cannot legally, and ought not in common fairness to the exhibitor, be altered until the prize in question has been won outright, whether it has to be competed for once or a dozen times! To admit that a judge, or a set of judges, may alter the rules of a society to suit an occasion that may arise at any show would be to cut into the bed-rock of sound judging, and cause confusion and vexation to all concerned. Where the rules of a society (clearly stated) have not been complied with, judges have no option but to disqualify, however disagreeable this may be. I think, however, they are quite within their right in recommending a special prize to the defaulting exhibit equivalent to the position it would have occupied otherwise, providing, of course, it was not disqualified for fraud. There is room for careful revision in most schedules, as well as for a clear statement of the power and limitations of a judge's duty, and nothing but good can come from an impartial discussion of this subject.—N. F. BARNES, *Eaton Gardens, Chester*.

Sweet-scented Musk Wanted.—Will you kindly tell me if it is possible to get plants of the old-fashioned strong-scented Musk with small yellow flowers? I remember that one small plant would scent the whole room or greenhouse. I have bought four plants this summer, three in Hants and one in Lincolnshire, all at different nursery gardens, but they have no scent to speak of. Has the strong-scented kind died out, and, if not, where is it to be obtained?—A REGULAR SUBSCRIBER. [The point raised by our correspondent is an interesting one. We have not seen a scented Musk plant for several years. At a recent meeting of the scientific committee of the Royal Horticultural Society this question was raised by Mr. A. W. Hill.—ED.]

Abutilons for Greenhouse Roof.—Not long ago a correspondence took place in THE GARDEN with regard to the different purposes for which Abutilons might be employed. Among the various uses was that of clothing the roof of a greenhouse, for which they are particularly well adapted. Any one in doubt upon the subject would do well to pay a visit to No. 4 Greenhouse at Kew, where a plant of the rich yellow-flowered variety, Golden Fleece, is covering an expanse of roof. The specimen is bearing a great profusion of its attractive blossoms, and not only has it been in this condition for a long time, but is likely to continue till the autumn. Not the least desirable feature when Abutilons are used as roof plants is that in the winter, when as much light as possible is an important consideration, the plants may be pruned back hard, to the great advantage of the different subjects underneath. On the other hand, in a genial temperature, Abutilons will, if required, bloom during the winter months.—H. P.

An Interesting Flowering Shrub.—While many of the members in this genus are either trees or climbers, *Casalpinia japonica* is remarkable in forming a handsome, though somewhat straggling, shrub some six feet in height. Except in the warmest parts of the country it must be regarded as tender, but given the protection of a wall with a southern aspect it seldom gets injured by frost. This species flowers freely every year at Kew, where plants have been grown in a recess outside the Temperate House for the past ten years. The pale yellow flowers, of which the uppermost petal is striped with red, are borne in terminal racemes on the young growths in June. The shoots, as well as the midrib of the large bipinnate leaves, are armed with stout spines. To flower this plant successfully very little pruning is required; it is, however, necessary to shorten back some of the longest shoots occasionally. *C. japonica* is a native of Japan. It was introduced into this country nearly thirty years ago by Messrs. James Veitch

and Sons, and first flowered in 1887 in their Coombe Wood nursery.—W. T.

FORTHCOMING EVENTS.

August 19.—Fraserburgh Flower Show (two days).

August 20.—Barnsley Agricultural and Horticultural Show.

August 21.—Shrewsbury Summer Flower Show (two days). Caerphilly Flower Show. Weston-super-Mare Flower Show. Margam Flower Show.



A LITTLE-KNOWN WALL SHRUB: *CASALPINIA JAPONICA*.

Cowbridge Flower Show. Derbyshire Agricultural and Horticultural Society's Show at Derby. Royal Berks Show. Banffshire Flower Show. Callander Flower Show.

August 22.—Aberdeen Flower Show (three days). Peebles Flower Show. Manchester and North of England Orchid Society's Meeting.

August 24.—Cupar Angus Flower Show. Matlock Flower Show. Ealing (Brentham) Garden Suburb Flower Show.

THE ROSE GARDEN.

ROSES WITH BAD HABITS.

(Continued from page 400.)

Marquise de Sinety.—I fancy I can hear some readers saying, "Surely you are not finding a fault in this superb Rose!" but I must reluctantly confess that its open flowers are often very poor in colour and extremely shapeless. I know one could remove them before they attained to this condition, but, still, I wish it had a better finish.

Etoile de France, the parent of so many of our recent red Roses, including Leslie Holland, would be a superb variety if it did not have "fits of the blues." After a few tropical days the colour is glorious, but a succession of dull days will bring out the objectionable tint even in the half-open blooms.

Harry Kirk.—What a grand Rose this would be if we could always catch it right; but, somehow, from a hundred plants one could not cut a dozen good blooms at any one time, owing to so many in the large clusters paling to a very pale straw shade and being woefully thin and ill-shapen. Of course, one could disbud, but then this ought not to be necessary in a garden Rose. Then mildew! What a culprit it is in this respect.

William Shean.—Truly a wonderful Rose when fastened securely to a wire and well displayed upon an exhibition table; but how does it appear in the garden? I venture to say this Rose has disappointed quite a number of enthusiasts, who think more of their garden display than they do of the show-tent for unless the blooms are staked they present a sorry appearance. Personally, I see no more objection to staking Rose growths than doing the same with Carnations, but there seems an objection to it by the amateur grower.

Lady Ursula is another hang-the-head sort, a fault which considerably discounts its usefulness in the garden.

Lohengrin when seen at a show almost compels one to order it by reason of its size, fulness and shape, but it has a peculiar habit of changing colour to a sort of bluish pink, a shade it is impossible to admire.

Mrs. Aaron Ward.—Exquisitely beautiful when it comes its true Indian yellow colour; but far too frequently nearly white flowers will appear, which considerably spoil the effect when the Rose is massed.

Mrs. Stewart Clark is far too vigorous to be used with other Roses, and I fear it has spoilt many arrangements owing to this excessive luxuriance. It may not be a bad habit, but I think nurserymen are to blame in not describing its growth, for it is

often marked as being "Vig.," the same term being used for, say, Caroline Testout. Grow it as a big bush, as I saw it at its raisers' at Belmont; then it is all right.

Maman Cochet, where it produces one perfect bloom, yields a dozen split or malformed. Is this the fault of the Rose or the grower? I rather think the grower is often to blame, probably by growing it in soil much too strong and rich, or by faulty pruning. I once saw a grand plant upon a south wall, evidently very moderately pruned, and quite a number of the blooms were of good shape. It is very strange that the white sport comes more frequently good in form than its parent. P.

(To be continued.)

ROSE A PARFUM DE L'HAY.

IN spite of its cumbersome name, this is a very useful early-flowering Rose. It is a Hybrid Rugosa, but much nearer the Hybrid Perpetuals with its splendid foliage than Mrs. Anthony Waterer. It is brighter in its crimson colour; in fact, quite near the colour of General Jacqueminot. The flowers are large and double, rarely coming perfect, but when in bud are very pretty, and their fragrance is delicious, quite as unctuous as some of the best Hybrid Perpetuals. Mrs. Anthony Waterer has the unique habit of flowering the whole length of its growth, so that on standards the drooping shoots are quite of a crimson glow. The Rose under notice has not this peculiarity.

These Hybrid Rugosas are very fine things, and should be more frequently planted. If pruned down to about three feet or four feet, they make fine round bushes. This is better than leaving them unpruned, as some do, because then they become rather ungainly in appearance. If we could get a good crimson Conrad F. Meyer, it would be a great gain. This latter upon an east wall has been much admired this year, some of the blooms being quite of exhibition standard. E.

ROSE BLUSH RAMBLER.

HAD I to be content with one climbing Rose, I should unhesitatingly select Blush Rambler.

Year after year it comes regularly into bloom in June, and is literally smothered with flowers from base to summit. It requires no special treatment, simply needing to be well planted in full sun with a pole or pergola to climb up. Left to go its own way, there is no more pleasing sight in the Rose garden. It is perfectly hardy, and therefore needs no protection in winter. All that it asks for is that the old wood should be cut out after flowering, so as to allow the young shoots to ripen. Blush Rambler has the good quality of not having "bare legs" like so many climbing Roses, it being clothed with foliage, and frequently flowers down to the ground.

Weybridge.

THE GREENHOUSE.

MALMAISON CARNATIONS.

[In Reply to Several Correspondents.]

QUITE recently several of our readers have expressed a desire to know something about the general cultivation of these ever-popular flowers, and as the subject is of seasonable interest, we gladly accede to their wishes. In one instance the request is for information "from cuttings to flowering plants and to flowering them a second year." At the outset we may say at once that experience

is essentially a greenhouse subject, not one to be coddled to death in the close, stuffy atmospheric conditions of an ordinary greenhouse where artificial heat is applied or misapplied without rhyme or reason, but one to which overhead protection at all seasons of the year is an absolute necessity. Of equal importance, if any measure of success is to follow, is an airy structure where condensing moisture—that great creator of the dreaded rust—is a thing unknown. Light, therefore, and a free circulation of air are important factors in the case. Then it must not be overlooked that the Malmaison Carnation plant is nearly or quite hardy—we have, indeed, known the plants to endure for years in the open in both light and heavy soils—but for the reasons given above, and because the flowers are invariably ruined by wet, its cultivation in the open air is not seriously or generally undertaken. We make mention of the hardness of the plant, however, to demonstrate that, while requiring overhead protection, it is also quite opposed to artificial heat beyond that which maintains a dry, buoyant atmosphere. The need for artificial heat, then, is chiefly to dispel damp and to secure a temperature of about forty-five degrees or rather more. Hence, unless a house can be devoted to the plants, only such things as are likely to do under similar conditions should be associated with them.

Securing the Plants.—Established pot plants may be secured at almost any season of the year, while the young plants—the product of the current season's layers—are usually available from September onwards. The plants at that time are in 3-inch or 4-inch pots, and will be safe therein till the turn of the days, when a shift to 5-inch or 6-inch pots should be given. Occasionally the young plants are accommodated in a pit or frame, and these, if light and airy, answer quite well for a time.

Soil.—Rich pasture loam—that known as top spit and with a tendency to heaviness—is the best so far as the staple soil is concerned. It should have been stacked some months prior to use, and if manure was added at the time, no further manure will be necessary at potting-time. The addition of good leaf-mould, with a little soot and sand, will be all that is necessary, though bone-meal at the rate of a 5-inch potful to each bushel of soil is advantageously employed by some.

Potting.—In all the stages the potting must be firmly done. Loose soil about the roots would constitute a fatal error. The soil should be fairly rough, and where a sieve is used, that having an inch mesh will be found quite small enough. The pots should be perfectly clean and dry. New pots, by reason of their moisture-absorbing character, should be soaked in water for a short time, and subsequently allowed to become dry before being used. A free and ample drainage is very necessary.



ROSE BLUSH RAMBLER COVERING AN ARCH IN A WEYBRIDGE GARDEN.

has shown that by far the best results follow when the plants are propagated from layers, and that cuttings are only resorted to by experienced cultivators or propagators and for some specific purpose. In such circumstances, therefore, the cutting system is dismissed without more ado as being unsuitable to the amateur or beginner. The layered plant, on the other hand, and more particularly when established in a pot, is a good foundation, and with such, given attention to cultural details by the way, success may be secured with comparative ease.

Making a Start.—In the first place, we cannot too strongly emphasise the important fact that for all practical purposes the Malmaison Carnation

B.

At potting-time the ball of earth containing the roots should be on the dry side, the potting soil mixture being in a similar condition. Thus arranged, the soil can be firmed with impunity. Not so, however, should the soil be unduly moist, since the necessary ramming would render it adhesive, and therefore uncongenial as a rooting medium for the plants.

(To be continued.)

THE KITCHEN GARDEN.

THE FENNELS AND THEIR CULTIVATION.

THE common Fennel (*Foeniculum vulgare*) is a well-known plant in good gardens where a collection of herbs is grown for culinary purposes. It is a South European plant, and regarded as being indigenous to the coasts of Britain from Norfolk to North Wales. It is used for fish sauces and garnishing. It is a perennial, but a short-lived one under cultivation, especially if it is allowed to flower and seed; but this is not a serious drawback, as it is easily raised from seeds, which should be sown in lines 2 feet apart. Naturally, it enjoys a light, warm soil.

In addition to the above there are two other Fennels which are practically unknown in our kitchen gardens. They are, however, well worth cultivating in good establishments where variety is looked for; and many people who have enjoyed them in Italy are at a loss to know where to get seeds and how to cultivate the plants in this country.

Foeniculum officinale, or Long Sweet Fennel, is closely allied to the above, but is a much stouter plant, with less finely divided leaves. This plant is best grown as a biennial for use during spring, and should be sown during September, in lines 2 feet apart, on light, warm soil. It is generally used raw, the flower-stems being used while they are running up to flower. The *Carosella*, which is considered such a great

delicacy in Naples, is supposed by some authors to be a form of the above, or else closely related to it. The fresh, tender stems, still enclosed in the sheathing leaf-stalks, are broken in lengths and served up raw. The seeds of the above and the common Fennel are used in the manufacture of liqueurs.

Foeniculum dulce, Finocchio or Florence Fennel, is an annual and a native of Italy; it is the most important one for cultivation in this country. Compared with the above, it is a much shorter-growing plant, and very short-jointed at the base. The light green leaf-stalks are very broad at the base, and overlap one another so much at the base of the stem that they form an enlargement varying in size from that of a hen's egg to one's fist; this enlargement is white and sweet inside, and may be eaten raw, but is generally boiled, when it has a sweet, delicate flavour. Its cultivation is quite simple, as seed may be sown about the end of March in drills from 20 inches to 24 inches apart.

When large enough to handle, the seedlings should be thinned out, leaving them from 9 inches to 1 foot apart.

With the exception of plenty of water during dry weather, the plants require no other attention until the enlarged leaf-stalks are about the size of a hen's egg, when they should be half covered by drawing some soil up to them. In about a week or ten days the most forward may be cut for use. If required, successional sowings may be made throughout the summer. J. C.

THE ROCK AND WATER GARDEN.

A LOVELY WOODLAND ANEMONE.

(*A. APENNINA*.)

THIS is the wild Anemone of Italy, and takes the same place in that country as our own

effect. There are situations in most gardens where this Anemone could be planted and left to take care of itself, when, after a few seasons, lovely pictures, growing in beauty year by year, would result. In thin plantations or woods where the sun can reach it, charming effects may be obtained. It gives increasing proof of its value with each succeeding spring. In beds and borders its starry blue flowers, rising above the deeply-cut leafage, have a delightful effect; but it is when naturalised on grassy slopes or in woods of deciduous trees that it is seen at its best. It spreads its soft blue around the boles of giants of the woodland in yearly increasing breadths, here and there rising through a network of trailing Ivy and holding its own without apparent effort. The sight of a colony of these flowers, clothing a grassy knoll at the foot of a great Oak or Elm with a veil of blue, is a lovely picture on a morning in early spring, the colour-effect being enhanced if Lent Lilies in quantity are associated with them, the pale yellow of the



THE APENNINE WINDFLOWER (*ANEMONE APENNINA*), IN A ROCKY BANK. NOW IS THE TIME TO PLANT.

Wood Anemone does in our copses and woodlands. It is a charming little plant, with downy leaves, divided somewhat like those of *Anemone nemorosa*, and of a tender green hue. The blossoms are sky blue in colour in the interior and paler on the outside, with from ten to twelve star-like divisions, which are narrowly elongated and surround a cluster of whitish stamens. It blooms in April and flourishes in open woods, copses and shrubberies. It thrives best in a porous soil rich in humus. There is a pure white variety and one with dark violet flowers, as well as a double form; but none is as beautiful as the clear blue type. As it may now be procured in quantity at a very cheap rate, there is no reason why it should not be planted extensively in the autumn by all and sundry. To dot it about in small clumps in the beds is a poor way of growing it; but by planting it in the grass we can view it under conditions similar to those it luxuriates in on the Italian sward, and it creates a delightful

Narcissi forming, with the azure of the Anemones, the varied greens of the grass and of their respective foliage, a colour-harmony exquisite in its gradation of tints. Such glimpses as these, obtainable in almost every garden at a trifling cost, are far more satisfying to the eye than the infinitely more expensive and less natural breadths of gaudy bedding plants, to which, later in the season, the greater part of many a garden will be devoted.

A. apennina has been naturalised by the thousand in numbers of English woods, so much so that by some it is considered to be a native plant. Where it is happy and the soil is to its liking, it spreads rapidly, both by seed and by underground stolons, and soon occupies a large expanse of ground. In the rock garden it seems as much at home as when nestling at the foot of some monarch of the glade, and, blooming among the curtains of white Arabis, it is one of the prettiest features of the spring months. In the accompanying illustration it is shown growing at the foot of a steep rocky bank at

the end of a wood, where a few corms were planted many years ago. These have increased to such an extent that they now occupy the whole ground space at their disposal, and are a pretty sight when in flower in the spring, many of the blooms being pure white.

WYNDHAM FITZHERBERT.

CAMPANULA G. F. WILSON.

OF the many charming members of the Campanula family which delight us with their flowers from mid-June and onwards (just when the chief flush of the alpine garden is likely to be waning), that known as *G. F. Wilson* easily holds a prominent position. In stature it somewhat resembles *C. pulla*, but the foliage is more hairy, and it has much larger and wider, open flowers, while with me at least its constitution is much more vigorous.

The freedom with which it flowers is simply amazing, sheeting that portion of the garden which it inhabits with rich blue, and usually remaining in flower for six or eight weeks. This, naturally, depends on the weather conditions, however,



CAMPANULA G. F. WILSON, A DWARF PLANT FOR THE ROCK GARDEN.

since heavy rains will sometimes lay the growths on their side and otherwise damage them. In this respect, however, owing to its dwarfer habit (it rarely exceeds 3 inches in height), it is not so prone to destruction as its rather taller relative *C. pulloides*, which with me sometimes suffers rather badly.

I find that any tolerably sunny position in light, gritty soil with some humus added suits this decorative Bellflower admirably, while if it is desired to propagate it, every tiny piece of the cream-coloured underground stems which begin to "push" in myriads in the early part of the year (often about the end of March) will readily root if pulled off, potted up in light soil, and kept moist and shaded, very often flowering profusely the same season.

This plant looks particularly well if planted round the edge of a good-looking lump of stone in the alpine garden, both at its base and up the more or less vertical sides, so that when in flower the stone appears to emerge from a perfect garland of dainty bells.

REGINALD A. MALBY.

TREES AND SHRUBS.

THE BLUE-FLOWERED ABUTILON.

I AM sending you a photograph of the blue-flowered Abutilon, which we have here growing in the open, but sheltered to some extent, as it is in an angle of a wall, protected from north and east.

It was raised from seed and flowered well last summer, after which there were a number of button-like seed-vessels on it, but it did not produce good seeds. This year it has reached a height of nearly thirteen feet. It has been in flower for nearly two months, and was past its prime when the photograph was taken. It has set seed more sparingly this year, but they are round knobs and promise real seed. Any hints as to preserving the plant (I am told the plants always die after flowering profusely) or raising cuttings will be very welcome.

Dangstein, Petersfield.

(Mrs.) M. LANE.

A HANDSOME AMERICAN TREE.

DURING the early summer of the present year, a few abnormal flowers were produced by a specimen of *Cornus Nuttallii* growing in the Arboretum at Kew. Though not in their true character, they were developed sufficiently to show what an attractive plant a well-flowered example must be, while in the autumn the brilliant colour which gradually spreads over the leaves reveals another feature for which the species is famous. Writing of *C. Nuttallii* in the "Silva of North America," Vol. V., pages 70-71, Professor Sargent says: "The flower clusters are more beautiful and conspicuous than the flowers of any other tree of the Pacific States; and in early spring when the great flower scales have grown to their full size, it lights up the dark and sombre forests which are the home of this Dogwood as with a bridal wreath, and as with tongues of flame late in the year, when the beauty of the brilliantly coloured leaves and large heads of bright fruit is often heightened by the appearance of autumnal flowers."

In North America it is found as a moderate-sized tree 40 feet to 60 feet high, or, when growing under the best conditions, 100 feet in height, with a trunk up to 2 feet in diameter. Its ovate leaves are from 4 inches to 6 inches long, 2½ inches to 3 inches wide, and downy on the under surface. The small yellowish green flowers are borne in dense round heads, which are conspicuous by reason of the four large white bracts which surround each head. In autumn the buds for next year's flowers may be recognised at the points of the shoots. During September the leaves assume a bright red hue and are very conspicuous. In America it is said to luxuriate in moist but well-drained soil beneath the shade of coniferous forests at an elevation of 3,000 feet to 5,000 feet above sea-level. The wood of the trunk is stated to be hard, strong, close-grained, and suitable for cabinet-making and for turning into small articles.

W. D.

THE FLOWER GARDEN.

SWEET PEA NOTES.

Sutton Green and Hinckley.—I think everyone is now agreed that the duplication of the National Sweet Pea Society's trials was an excellent step on the part of the committee. Curious differences were observable in the same varieties at the two places, a stock being mixed at one and true at the other; but this does not detract from the undoubted practical value of the experiment, which ought to be maintained if within the bounds of possibility. The season has been such an extremely busy one that fewer people than usual were able to go with the two expeditions which started from London; but those who did were more than pleased with the manner in which both Mr. Foster and Major Hurst had carried out the many details in connection with their onerous task. They deserve universal thanks.

Honoured Varieties.—The year 1912 will be notable for the fact that there were scarcely any really outstanding novelties in the trials. I do not desire to suggest for one moment that there was nothing good, but simply that there was no variety which caused all the world and all the world's wife to send forth a song of delight and admiration. The floral committee noted this, and withheld the honour of reserving a variety for a silver medal next year, and did not even go as far as to give a first-class certificate. Does

[Unfortunately, it is only possible to cultivate this beautiful Chilean shrub, *Abutilon vitifolium*, successfully in the open ground in the milder parts of the country, but in Devonshire and Cornwall it is usual to find magnificent bushes 6 feet to 16 feet high and as far across. Although not a very long-lived shrub, it may be depended on to grow and blossom freely for a number of years, while it is readily replaced by growing young plants from seeds, which ripen freely. Cuttings inserted in pots of sandy soil in a close and slightly warm propagating-frame may also be rooted. When a bush is inclined to become loose in habit, it is a good plan to shorten the branches considerably in February. This will result in more branches and a greater flowering surface. The flowers of *A. vitifolium* are large and showy. On different plants they vary somewhat in colour, but are usually blue or violet, although white ones are known. The same bush may be expected to bloom freely for ten or twelve years, although bushes which have bloomed well sometimes collapse for no apparent reason.—ED.]

this mean that we have reached the supreme point in Sweet Pea development, or simply that raisers are lying low for a time with a view to startling us another season? I think that a negative answer must be returned to both of these questions. There is still room for improvement in our favourite annual, and it will come, though the advancement will be slower in the future than it has been in the past, while raisers who have distinct beauties are not likely to hold them back any longer than they are absolutely obliged, for fear that a rival should come along with something similar, but even better, and reap the golden harvest. We are always waiting and hoping for the pure blue and the pure yellow!

Beautiful Whites.—My friend Dr. Hinton of Heytesbury was good enough to send me a short time ago a few flowers of his new white Constance Hinton, which is a real beauty, and will undoubtedly enjoy a wide popularity when it is put upon the market. I dare not go as far as to affirm that it will turn out Etta Dyke, but it is the equal of that splendid variety in more than one respect. In the earliest stages of development there is a green marginal tinge, but this soon passes and there remains a pure white, large, but exquisitely refined blossom. Practically all the stems are fours, and the individual flowers are well set. Constance Hinton did well at both sets of trials, and was much admired. King White, from Messrs. A. Dickson and Sons, Limited, Newtownards, is full of promise, and will certainly be seen again. It was given an award of merit. Stark's Florence Wright Spencer was also excellent.

A Common Variety.—I wish it to be clearly understood that I do not use the word "common" in the deprecatory sense, but to indicate that the variety Decorator, which received an award of merit, came from several sources. It is most aptly named, for there cannot be many varieties which produce a more decorative effect in the row. The plant grows well, is extremely floriferous, and the rich cerise red colour makes it exceptionally conspicuous even in a big collection. Those sending it were Messrs. Dobbie and Co., Messrs. Stark and Son, and Mr. A. Malcolm of Duns, so it is fairly widespread already.

Other Novelties.—Mr. R. Bolton scored with two varieties. One of these is named Agricola, and it is of that peculiar mixture of rose and mauve that does not invariably do itself justice out of doors. It is a bold, handsome flower. The second was the monster lilac rose R. F. Felton. This is so very vigorous that, unless a tight hand is kept upon it, it will assuredly come on the coarse side. Bertrand Deal, named after its owner, rose mauve in hue, and Lady Miller, from Mr. A. Malcolm, palest cream, flushed

apricot, were the only others to receive awards of merit.

HORACE J. WRIGHT.

BULBS FOR AUTUMN PLANTING.

CERTAIN annual events always give me an unpleasant shock, in that they mark the too swift passage of Time. Birthdays are unwelcome milestones in life's journey, and Christmas, once

a death's-head at the feast of summer to remind us we must prepare for next season. It comes when the garden is ablaze with flowers and full of promise for another three months of luxuriance, when every space seems more than filled, and the chief work in hand is tying up those plants coming on and cutting down those going over, to give space and air in the crowded beds. Then suddenly "Bulbs for Autumn Planting" pulls one up on the curb, and dread visions of hitting those already in the ground and plans for the addition of others fill the good gardener's mind. Many there be, all the same, who are not good, and stifle their consciences with the thought that November is time enough to plant bulbs, and so put off the planning and ordering till then, and frequently December is near when those bulbs get planted.

I feel that I have a mission to such procrastinators and a message for beginners, and that I must proclaim aloud the wisdom of bracing the shocked nerves and grappling with the bulb question now that the catalogues have arrived. By ordering early you get the pick of the bulbs in the best condition for planting, and, also, many kinds, once in the ground, are rooting and improving in strength and vigour, even though they will not appear above ground for many months, whereas they would be losing weight and perhaps contracting diseases even in the best-regulated storehouse.

I am not inclined to sound the trumpet and call you to plant Daffodils, though they need early lifting and planting as much as any; for have not the readers of THE GARDEN a special High Priest of the Daffodil? Is it not our reverend friend's place, not mine, to preach upon that theme? To him, then, I leave the Daffodil and Tulip, his chosen mission field, while I plead for other, less popular plants, perhaps, but not to be omitted in any good garden.

What Shall we Plant?—How many ardent gardeners wail and lament to me every season that they cannot get Winter Aconites, Snowdrops, early Anemones and such plants to grow. Others are enraptured with, if not envious of, a neighbour's clumps of autumn Colchicums, Crocuses or Sternbergias. "I can't grow them." "My soil does not suit them." "All I plant are failures," so they wail; and to them I cry

aloud, "Read and mark, and order at once from your autumn lists."

Colechieums.—Remember these produce large, perhaps rather coarse, but handsome leaves in spring, so allow room for them and reckon on their deep, glossy effect among spring flowers in choosing their sites. Then go boldly ahead. The emperor of the family is the pure white *C. speciosum album*,



A GOOD SPECIMEN OF THE BLUE-FLOWERED ABUTILON
(*A. VITIFOLIUM*). (See page 414.)

eagerly looked forward to as a season of pleasant surprises and gifts arranged for us by our elders, now that we are older entails such efforts of organisation and shopping that the sudden realisation that the time has come to begin it all is always a shock to the nerves. A still worse shock for the nervous system is the arrival of the first list of "Bulbous Plants for Autumn Planting." It is

one of the loveliest of all bulbous plants, a White Swan Tulip in October. I remember when five guineas were asked—and given, too, by a few lucky possessors of such rarities—for single bulbs; but it is one of the consolations of advancing years to have lived long enough to buy this glorious treasure at the rate of 6s. a dozen. Messrs. Backhouse of York are the benefactors of the gardening world who raised it, and now distribute it at this low figure. The companionship of the rosy lilac typical form helps to show up the beauty of the white one, and if other good varieties can have space allowed them, Bornmülleri and giganteum are two that should not be omitted. The former has very large flowers, lilac, with a conspicuous white centre. The latter is much like speciosum, but has a greenish yellow tube that gives a pleasing finish to the large purple lilac blossoms.

E. AUGUSTUS BOWLES.

(To be continued.)

SOME NEW DAFFODILS.

[See Coloured Cover.]

With the exception of Bernardino, all the other Daffodils on the cover of this issue are specialities of

colouring round the cup is Lavender, which was raised by Mr. P. D. Williams, and which first saw showlight at Birmingham some few years since. Little Joan has not such a wide and pronounced edge, but it is a far more shapely flower, and one which would bring credit to the most select exhibit.

Just below it, on the right, is Bernardino, which is, as I always say, one of the *finest of all Daffodils*. I put it in the very front rank. Certain Daffodils we may call unitarians, some duotarians, others trinitarians, as far as they combine in themselves excellences for garden, exhibition and cutting. Bernardino is a trinitarian. Tall, robust, rapid increaser, floriferous and graceful is its character out of doors. On the show-table it has delicacy of colouring, good balance, shapely perianth and a general attractiveness which is catholic in its appeal, while when cut in a partly-expanded state, with a good long stem, and allowed to open in water so that all its beautiful apricot red tints are retained, it is certainly second to none in its loveliness. No one in the future will regret £2 spent on a bulb now. It will always be a great flower.

On the extreme right we have quite a different type, of which there are none too many—drooping

blooms *well* above the foliage, possibly a bit of the "rough-and-tumble" look about it. I have named it Mrs. Gamp. In the letter referred to, enough was said to whet my appetite; and a few bulbs of White Countess are coming this way to try conclusions next spring with my old lady.

It is increasingly difficult to keep pace with the red eyes. I have not seen Red Lady to know her. The fault may be mine and she has exposed her charms to unheeding eyes; or it may be that Mr. Bourne has picked it up out of Mr. Wilson's garden direct, or from his stand, where it would only be under number. The description is very taking, special emphasis being laid on the vivid red cup and the white over-lapping perianth. Mr. Bourne likes good new things. Judging from his excellent little illustrated price-list, he often falls a victim to their charms. It is full of novelties of all prices, from the rich orange-cupped Helios, which I almost think was the most striking flower of the 1912 season—price £15—down to White Countess and Selene, another giant Leedsii for the garden, which can be had, the one for 7s. 6d., and the other (Selene) for 5s.

Mr. Bourne won the gold medal of the Royal Horticultural Society for his collection of fifty at the Daffodil Show at Vincent Square this year. Considering the year, they were a very good lot, but I hear he is not satisfied altogether with his present ground. He has often told me that his wish is to put before his clients none but the best—the best varieties and the best-grown stuff. I know he will make every effort to do so. Hence it would not surprise me in the least to hear that he is seeking pastures *old* in a more favourable part of the British Isles for Daffodil culture than is the neighbourhood of Bletchley. For his own sake, and because he is the son of one whose memory every Daffodil-lover reveres, I wish him God-speed in his venture wherever he may finally settle down. JOSEPH JACON.

A RARE YELLOW PÆONY.

(PÆONIA LUTEA.)

This beautiful yellow Pæony is very little known, except to a comparatively small band of hardy plant enthusiasts. The late Mr. W. E. Gumbleton, one of the most discriminating of flower-lovers in his day, made a special study of the yellow Pæonies for some years, and three years ago we published a coloured plate of the yellow-flowered Pæonia Delavayi from flowers grown by him. *P. lutea*, of which we give an illustration, must certainly rank as one of the most beautiful of the yellow species. It was found in Yunnan in 1882 and sent to the Museum of Natural History in Paris, and has since been distributed. As it was introduced so far back, it is a matter for no little surprise that it should still remain scarce in cultivation. There are, however, one or two improved varieties in commerce, and the variety major, which surpasses the type in its intensity of colouring, is perhaps the best known. It is also worth recording that a fine double yellow-flowered Tree Pæony which bears the name of La Lorraine has recently been raised by the crossing of Pæonia lutea and a variety of *P. moutan*. *P. lutea* is a hardy species, requiring much the same treatment as the ordinary herbaceous and Tree Pæonies. It prefers a rich soil, and will thrive either under the shelter of a wall or in an open position. The flowering season is late May and June. For garden effect where choice plants are treasured, this gem is deserving of extended cultivation.



THE YELLOW-FLOWERED PÆONY (PÆONIA LUTEA).

Mr. Christopher Bourne. This gentleman, as readers of THE GARDEN know, has embarked in the Daffodil and bulb business, and it is his intention to become known as an introducer of refined flowers. Little Joan, figured in the plate, may be taken as a typical example of the type at which he is aiming. I admired it very much when I saw it on one occasion last spring. As may be judged from its proportions with regard to the others, it is on the small side (diameter of perianth $2\frac{1}{2}$ inches, cup three-quarters of an inch), and I fear would-be buyers will think very little is offered them for their money. But one must be prepared to pay if we want to acquire a novelty, and the delicate pink edge to the pale primrose centre is something which is at present very uncommon. The best-known flower with this pink tone of

or pendulous blooms, with a fairly long cup of red, and with white reflexing perianths. As Mr. Bourne says in his catalogue, they are Fuchsia-like in appearance. In old days we would have called Tritoma a Nelsoni. It has much of the character associated with this now-digested section, and, like them, it is a late bloomer. White Countess belongs to the giant Leedsii; I do not remember having seen it, but from what Mr. Bourne tells me, in a private letter written before I knew anything of this plate, it must be a nice thing. The cup never gets white and the perianth keeps flat. It came from Mr. Wilson, and it is described as a tall, fine garden plant. I know some of this good man's garden Leedsii. One, of which I bought the stock two years ago, is, in my opinion, the best I have ever seen in a garden—massive,

GARDENING FOR BEGINNERS.

HOW TO TAKE AND ROOT CUTTINGS OF BEDDING PELARGONIUMS.

At this season one's thoughts naturally turn to the increase of the different bedding plants for



1.—BEDDING PELARGONIUM SHOOT SUITABLE FOR MAKING INTO A CUTTING.

next year's display. Despite the fact that Pelargoniums are sometimes condemned, they still hold their own as one of the most popular of all subjects for the purpose, and our gardens would certainly be very much the poorer without them. Now is just the time to increase them by means of cuttings, which should be taken with as little delay as possible. In taking cuttings from the flower-beds, an important matter is to take those that will be less missed; that is to say, the bed should, when finished, show but few traces of having been interfered with in any way. At the same time, it may be pointed out that by far the best cuttings are formed of shoots of moderate vigour, as the very succulent ones are more apt to decay, a remark that applies equally to the weak ones that are overshadowed by the upper part of the plant.

Making the Cuttings.—A good length for the cutting is about four inches, and it should be prepared for insertion by making a clean cut with a sharp knife immediately below a joint and removing one or two leaves at the base. When a shoot is closely examined, it will be seen that each leaf has a wing-like scale at the base, which it is necessary to remove, otherwise moisture is apt to collect there and thus prove a seat of decay. In the case of most plants, it is very essential that the cuttings be inserted as soon as possible after being removed from the parent plant; but Pelargoniums form a decided exception to this rule, as they are, especially if rather succulent, all the better if laid out thinly on a bench for twenty-four hours before they are prepared for insertion. One effect of this is that the leaf-scales flag somewhat, and they can then be stripped off without difficulty, whereas when quite fresh the bark may possibly be torn a little in carrying out the operation.

Inserting the Cuttings.—The cuttings being all prepared, it must then be decided whether they are to be put in pots or boxes. This is, as a rule, determined by the question of the space available during the winter, as a greater number can be kept in boxes than in pots. If in pots, a good plan is to put four cuttings around the edge of a pot 5 inches in diameter, as may be seen in the illustration below. Whether boxes or pots are employed, it is most essential that they should be quite clean and effectually drained by placing a few broken crocks or oyster-shells over the bottom, disposing them concave side downwards. The boxes, of course, must have holes bored in the bottom, in order to allow the surplus water to pass away. A suitable compost for the cuttings may be made up of one part each of loam and leaf-mould, with half a part of silver sand, the whole being thoroughly incorporated together, and it will be all the better if passed through a sieve with a half-inch mesh, placing the rough portions which do not go through immediately over the crocks in the pots or boxes. In inserting the cuttings, the dibbler used should not be too pointed, otherwise a space will be left at the bottom of the hole when the cutting is put in its place, and this retards the action of rooting, for it is very essential that the compost is closed around the base of the cutting. Overcrowding, too, must be guarded against, while, on the other hand, it will be necessary to economise space as much as possible. By some a layer of clean sand is placed over the surface of the soil before the cuttings are put in (this was at one time universally done), but it has one great drawback, namely, it is difficult to ascertain the state of moisture underneath. For this reason it is by many discontinued.

After-Treatment.—The boxes or pots being thus filled with cuttings, they may be watered through a fine rose and stood in a sunny spot out of doors. If there is a frame available, so that they can be stood therein and the lights put on in the event of very heavy and continuous rain, so much the better. Still, it is not often needed at this time of the year. So treated, they will not take long to root, when, if there is plenty of space available

for the winter, they may be potted off singly; but where the question of room at that season is,



2.—THE CUTTING PREPARED FOR PLANTING.

as in most cases, a consideration, they may be left in the pots or boxes till the spring. During the winter, whether potted singly or not, they should be given a good light position in a structure safe from frost. The soil must be kept fairly dry, though not parched up, and the plants be frequently examined in order to remove any signs of decay. A shelf in the greenhouse is a very suitable place for these young Pelargoniums during the winter. H. P.

BLACK CURRANTS AFTER FRUITING.

I HAVE seen amateurs cut off the tops of the branches directly the fruit has been gathered, with the result that young shoots grew and formed tufts at the end of each one, effectually excluding the light from the centre of the bush. This bad practice unduly excited growth of a useless nature at a time when the wood and leaves should be maturing. Very old branches must be cut out now to admit light and air to the younger ones; then the latter will bear more and finer fruits next year. B.

GREENING SEED POTATOES.

MANY readers of THE GARDEN will now be selecting some of the Potato tubers for seed purposes next year. Indeed, all seed tubers should be picked out soon after the crop is lifted, and stored by themselves in cool, dry, well-ventilated buildings where plenty of light can reach them, but be safe from frosts. Before storing them in such places, however, the tubers, which should weigh from 2½ oz. to 3 oz. each, should be spread out thinly and exposed to the sunshine and light generally, under frame-lights or in an open shed. When thoroughly greened they will keep well through the winter. SHAMROCK.



3.—FOUR CUTTINGS PLANTED AROUND THE SIDE OF A 5-INCH POT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Lilium candidum.—The common white or Madonna Lily oftentimes thrives much more luxuriantly in cottage than in any other gardens, and does not seem so prone to disease. Recently I noticed a very fine effect caused by intermingling this subject with the scarlet *Lychnis chalcidonica*. The planting should not be deferred any later than possible. Have the ground well dug, selecting a piece of ground fairly porous and in good condition; while if the ground is heavy, add some light material, such as leaf-mould and road scrapings. Plant 5 inches or 6 inches deep, sprinkling a little powdered charcoal round each bulb.

Verbenas.—When grown in conjunction with other plants or separately on a sunny border, these plants make a striking display and are very effective, particularly for ribbon borders. The growths require to be periodically pegged down. Now is a good time to take cuttings for next season's display. Young growths taken off will soon root if dibbled fairly thickly into 5-inch pots containing a mixture (passed through a fine sieve) of loam, leaf-mould and plenty of sand. Make firm and stand in a cold frame, give a good watering in, keep close, and shade from bright sunshine.

Phlox decussata.—The varieties of these have been particularly fine this season and created a fine display, due, no doubt, to the occasional showers throughout the season, drought, especially on light soils, being fatal to their well-doing. Propagation may now be carried out and the cuttings treated the same as Verbenas, or dibbled into a shallow frame and kept close.

The Rock Garden.

Sedum kamtschaticum.—This is a fine plant for the rock garden and for planting beside paved walks at this season of the year. The growth is vigorous and the flowers are produced with wonderful freedom. Commonly known as the Orange Stonecrop, the orange yellow flowers are very conspicuous against the large green foliage. *S. glaucum* has also been an attractive plant and smothered with flowers.

Tunica Saxifraga flore alba pleno.—This is unquestionably one of the finest plants of recent introduction for the rock garden, and will become deservedly popular, particularly for its free and continuous flowering from early until late in the summer. The flowers are pure white, double, and graceful in habit, and the plant seems perfectly free in a dry season such as the last, but is also well able to withstand heavy rains.

Micromeria Douglasii.—For trailing over rocks or a wall, this North American plant is well adapted, being remarkably free in growth and of a trailing habit. The flowers, though rather inconspicuous, are, nevertheless, sweetly scented and of a whitish colour.

The Shrubberies.

Ceanothus azureus.—For flowering during this month there are several excellent varieties of this shrub, and two with which I am well acquainted and highly meritorious are Indigo (a variety with deep indigo flowers) and Perle Rose (a variety with large trusses of rose-coloured flowers). Another shrub of great merit is *Perowskia atriplicifolia*, the spikes of blue flowers contrasting well with the silvery tomentose foliage.

Plants Under Glass.

Early-flowering Bulbs.—The catalogues are now coming in freely, and I would advise the early ordering of those bulbs at least that are wanted to flower soon after Christmas or before, such as Roman Hyacinths, Narcissi and Tulips, and upon their arrival unpack them and store in a cool, dry position until potting or boxing is done. Almost any old potting soil may be utilised, but for preference a mixture of loam, leaf-mould, spent Mushroom-bed manure and coarse sand.

Chrysanthemums.—Those growing for big blooms will now need liberal feeding to build up the buds that are retained, varying the stimulants as much as possible. With artificial manures I think the better plan is to mix them in the water before applying. This is best done by gradually moistening and mixing in a pail of water, then stirring the contents into the bulk to be used.

Through constant waterings the surface-soil becomes sour, and when removing weeds lightly aerate the surface. If there is room, apply a little rich top-dressing. Keep the growths tied up as becomes necessary and remove superfluous shoots.

The Kitchen Garden.

Cauliflowers.—Between this date and the end of the month, according to the locality, is the best time to sow for plants to stand the winter, though in the South-West the first week in next month may not be too late. Select a suitable seed-bed, as previously advised, make a fine tilth and sow evenly but not too thickly, keeping the surface moist in the event of dry weather.

Cucumbers.—Make a sowing now for supplying fruits during late autumn and winter. Raise the seed, as previously advised, by sowing singly in small pots, and plunge the pots in a warm house. When germinated, elevate near to the glass. For this crop it is well to plant in a house that can, when necessary, be supplied with plenty of fire-heat, and also admit the maximum amount of light, otherwise the growth will be weak and fruitless.

Autumn-sown Onions.—For spring and early summer use the autumn-sown or Tripoli Onions are particularly useful, and I would certainly recommend a small bed being sown in any garden. If seeds are sown too early, the plants are liable to run to seed, but about the 20th of this month is a good date. Have the ground well worked, add plenty of soot and wood-ashes to the surface, and rake down finely before drawing the drills. White Leviathan, White Emperor and Giant Red Rocca are all good varieties, the latter keeping well.

Fruits Under Glass.

Strawberries for next season's forcing should by now be getting well established in their pots in which they will fruit. Keep the plants free from weeds and the runners picked off, but only in the case of leaves that are absolutely dead remove the foliage. Keep the plants well watered and damped over in the evening on warm days, and see that the pots stand quite clear of one another, so that the crowns may become well ripened.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Sweet Peas.—These have made extraordinary growth, and it will be worth consideration whether or no to relieve the plants, at least of the top-most shoots, which otherwise will collapse and to a great extent spoil the effect for garden decoration.

Hollyhocks.—So far, the rust disease has been less troublesome than in some years, but it usually makes much progress once cooler nights arrive. The affected leaves should be removed every few days. See that the flower-stems are well secured, and the tips may be pinched out of the tallest, which will be effective in making the lower blooms finer. If seed for another year's stock has not been sown, it may still be done. If sown later the plants are very late in flowering.

Carnations are now in full bloom, and will from time to time need attention to remove the decayed flowers. Continuous-flowering varieties, such as the old Raby Castle and Duchess of Fife, will also need attention to see that the supporting sticks do not give way, and to tie the later stems loosely in before they fall over. Early layers will be well enough rooted to transplant. Nothing is gained by leaving them, because the roots spread a good deal, and a less well-rooted plant results if left too long. Belated shoots may yet be layered, but usually these must be wintered in pots, being too late in rooting for autumn planting, for which early-layered plants alone should be used.

The Wild Garden.

Bocconias.—There is no better time than the present for curbing the habit for over-extension displayed by these. The parts to be removed are first severed from the mass to be kept by means of a sharp spade, and the underground shoots, being first eased with a fork, are not difficult to draw out of the ground. The tall Eastern Polygonums are even more inclined to overrun bounds, and they may be treated in the same manner. Cutting down the stems only delays for the moment

what must be done later, when the operation can be less easily and perfectly executed.

Campanulas.—The seeded shoots of *C. latifolia* and any others of an allied habit should be removed forthwith, not only on account of appearance, but because the seeds germinate so freely as to become a nuisance. Caution must also be exercised with the Umbelliferae. *Heracleum*, for example, if left to seed, is almost impossible to keep under, dressing the superfluous plants with sulphuric acid, which must be applied singly, being perhaps as satisfactory a way as any. Foxgloves, as a rule, may be left to themselves, also *Honesty*. Any time from now strong seedlings of various plants may be introduced.

The Vegetable Garden.

Mushrooms.—Where material for forming Mushroom-beds is to be had, a commencement may now be made for a bed to come into bearing in October. The chief care is to see that the material is not overheated, which not only produces inferior Mushrooms, but considerably shortens the time of bearing.

Cucumbers.—Though early plants are still bearing, it is desirable to provide for autumn and early winter by sowing enough seeds to produce plants for a fresh stock. The plants in crop will now ask for some artificial heat day and night to induce the continued production of new growth. Water at the root will possibly need to be curtailed, and overcropping should be strictly discontinued.

Tomatoes.—Provision for an early crop next year must now be made. This may either be done by sowing seeds or by cuttings, which root quite freely, provided they are not killed with too much moisture. The drawback to cuttings consists in the stems getting too hard, which is prevented by careful treatment throughout, and these have the advantage in ripening fruit earlier than seedlings.

Parsley.—Some of the old plants may be cut over to make young growths to come on for spring picking, and the seedlings from a late sowing be thinned to 4 inches or 6 inches apart. Thereafter the ground should be nicely hoed and cleaned. The main crop, if given plenty of space, will now be quite handsome, and will provide splendid material up to Christmas at least.

The Plant-Houses.

Gloxinias.—Those grown coolly will now be in flower, and with seedlings of the present year will be very useful for the conservatory and house decoration. They require rather careful watering, otherwise the foliage and the flower-stems damp. Early-flowered plants may be dried off and placed for the winter under the stove stages.

Cyclamen.—These are now making their last crop of leaves, and those in rather small pots and thoroughly well rooted will be all the better for occasional dressings of manure. Shading, except on very hot days, should be dispensed with. Old plants may be shaken out, repotted and placed in cold frames, kept close, where they will shortly begin to grow. Water must be very sparingly and carefully dispensed until growth recommences.

Chrysanthemums.—Bush plants, if growing rapidly, should be rather under-watered for two or three weeks to harden growth and keep them from growing too tall. Meanwhile, aphid will, in all probability, attack the young expanding leaves, a pinch of Tobacco powder affording a certain preventive.

Hydrangeas.—Young plants intended to be forced early next year should have only a limited supply of water at the root, in order to harden the wood and induce the formation of flower-buds, gradually lessening the supply and keeping the plants quite cool. The foliage also will mature and decay before winter, when the plants will go to rest.

Humeas.—These must on no account be permitted to get dry at the root, which is fatal, and if the pots are stood on a cool, moist bottom it is beneficial to the plants.

The Fruit-Houses.

Peaches.—For the next few weeks these will ripen very fast, and it is of advantage, if it is essential to delay ripening, to shade the trees heavily with mats, which may either be placed in front of the trees trained to back walls or be spread over the glass. The object is to keep the temperature low; consequently it is imperative that something thick, such as mats, be employed.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

WATER LILY (A. L.).—You had better isolate the affected plant, first laying it on a bag or mat and syringing it with an emulsion of soft soap and paraffin, 4oz. of the former and a wineglassful of the latter to two gallons of rain-water. Should the pest occur on the other plants, you should obtain some Tobacco rag and place it in a sack in the tank. By moving the sack from time to time the water will become charged with the juices from the Tobacco, and in time clear off the pest. If only the one plant remains affected, the cheapest way would be to discard it by burning.

LILY DISEASE (J. H. W. T.).—We know of no cure of the disease once it gains a footing. It may be kept at bay, or at least prevented from doing material damage, by an early spraying with sulphide of potassium, say, half an ounce to a gallon of soft water. This should not be applied oftener than once in three weeks, and it is important that a light spray syringe, such as the "Abol," be employed to ensure the wetting of both the upper and under surfaces of the leaves. This should be started in May and kept up at intervals till the flower-buds are fully grown. All you can do at the present time is to collect and burn all diseased leaves and stems, and spray the plants once or twice during the season. Anything that is done—lifting and drying off and plunging the bulbs in a bag of sulphur have all been recommended—should be of a preventive order, as the spread of the disease is too rapid once it has taken hold of the plants.

SOWING ANTIRRHINUMS IN THE OPEN (Constant Reader).—You ask whether you may take the recommendation to sow these in the open—recently made in THE GARDEN at page 353—"seriously," and whether you "may depend upon plants so raised for your summer bedding?" Certainly you may! We have not only implicit faith in our contributor in such matters, but of our own knowledge know that the results stated are easy of accomplishment. The Snapdragon is virtually a hardy perennial, and July-sown seeds should, for your district at least, ensure seedlings large enough for going into their permanent quarters in October, or not later than mid-March if you decide to leave them in the seed-bed through the winter. Only in the event of a very severe winter and with late-sown seeds would the seedlings be likely to suffer in the open; hence the need for securing hardily-grown plants as opposed to such as are weak from an overworked seed-bed. This latter is the precursor of many ills, and is continued, despite frequent warnings to the contrary. You have failed in the past to get an early flowering by sowing seeds in "spring"—a rather indefinite term—and by reason of your late planting; and seeds sown now would give you no better results if you cannot plant the seedlings till the spring bedding plants are cleared. In such circumstances the case could only be met by potting the seedlings into 5-inch or 6-inch pots, so that their progress be not delayed and the check caused by transplanting be reduced to a minimum. An article on the Malmaison Carnation appears in this issue.

TREES AND SHRUBS.

QUICK-GROWING BUSHES AND TREES (J. F.).—Unfortunately, you say nothing about the size of the garden, and we are unable to give you any sound advice in the circumstances. If you will tell us this and give us also an idea of its position and surroundings, we will give you the names of suitable things. Please say also whether the house is to border the roadway, and, if so, at what distance from it. There are many things which might be planted in the months named. We hope, however, you will proceed cautiously, as the curse of many a garden eventually is the undue haste and density of early planting. The quickest-growing things, those you appear to have in the mind's eye, are not infrequently the most voracious and unbeautiful, and, while robbing the garden soil, prevent the introduction of more ornamental subjects. In any case it would not be wise to plant before the house is built, unless at the boundaries where no interference was likely.

THE GREENHOUSE.

CYCLAMEN AND GRUBS (C.).—The grub on the roots of the Cyclamen is that of the Raspberry weevil. It is likely to be found also feeding on roots of a succulent nature in other pots. The best way is to turn out the pots and pick out the grubs, but possibly you might be able to get rid of them by pouring into the soil (not touching the root) of each pot a few drops of carbon bisulphide. This is a very poisonous compound, very evil-smelling, inflammable and explosive, and must be used with the greatest care. The grub becomes a beetle, which feeds on foliage at night, and may be caught by spreading a sheet of paper beneath plants attacked and shaking them or shining a sudden light upon them.

FRUIT GARDEN.

INJURY TO APPLES (The Rosery).—The Apple trees have been badly attacked by the Apple leaf-curling aphides. It is too late now to do anything. The trees should next year, at the end of February or beginning of March, be sprayed with alkali wash, and if this does not suffice, as soon as aphids appears in the spring spray with a nicotine wash or with quassia and soft soap.

MELON FOLIAGE DISEASED (H. G. N.).—Judging from the appearance of the leaves, we think the plants have been growing recently in too moist an atmosphere. They have also the appearance of having made a too gross and soft growth by having too much soil to grow in. This condition nearly always brings disaster to the Melon at the later stages of its growth in causing the foliage to damp off, as in your case, or in canker. The Melon does not require very much soil to grow in; it likes a heavy loam, pressed as hard as possible, and in its later stages of growth should have free ventilation in fine weather, not too much water at the roots, and a dry, warm air.

STRAWBERRY PLANTS NOT FRUITING (M. G. K.).—Your experience with Strawberries has been unfortunate. We think the hot, dry season of last year is primarily responsible for the failure. The crown of the plants in consequence of the drought failed to develop a free growth of crown buds (flowering buds), hence the failure. We would give them another chance, as there is no reason why they should not flower next year if the runners in the first instance were taken from fruiting plants. Try another plan with a few new runners as follows, and you will have a heavy crop next year. Trench your ground 2 feet deep, add well-decayed manure freely (say, a bushel to a square yard), mix well with the soil and plant in rows 18 inches apart, the plants in the row being 15 inches apart. Instead of planting one plant in the row at this distance, plant three a few inches apart only, treating the three as one plant. Procure strong, well-rooted runners as early as possible, and plant out not later than the middle of July.

PEACH LEAVES (J. L.).—The Peach leaves are attacked by the Peach shot-hole fungus (*Cercospora circumscissa*). The fungus frequently fruits on the pieces of leaf that drop out, so that all fallen leaves should be picked up, and, when spraying is done, the ground below the trees should be sprayed as well as the trees themselves. We think, for spraying Peaches, you would find commercial copper carbonate better than potassium sulphide. It is made by making 5oz. of copper carbonate into a thin paste with water, adding three pints of the strongest ammonia (880), which should produce a clear blue solution, and diluting with forty-five gallons of water. The spray must be applied like a mist, and it is possible it may have to be repeated.

FIG TREE CASTING ITS FRUIT (Ficus Investilis).—Figs in gardens have frequently been planted in a haphazard way, with young trees raised from pips or seed. When this is the case, satisfactory crops seldom or ever follow. The best sort to plant out of doors is the Brown Turkey. There are many causes responsible for the Fig tree casting its fruit. The following three are the most common: (1) The overcrowding of the branches in the previous summer at the time when the tree was in full growth. It is a well-known fact in the successful culture not only of the Fig, but of all hardy fruit, that the first essential is that the shoots of the previous year's growth (these are the shoots which produce the fruit) should be well developed, and as perfectly matured as possible, by the end of the summer. Unless these shoots have been well exposed to all the light, air and heat possible during their season of growth, these conditions cannot be secured. See to it that the best shoots on your tree this year are not choked with weak and useless branches, shutting out light and air. Do not hesitate to cut out to their base such worse than useless shoots. (2) Dryness at the roots. Both the wood and foliage of the Fig are of rather a soft and pithy nature, and, therefore, to keep in good health, should not be allowed to suffer from want of water during their season of growth. Trees growing against walls are liable to suffer from drought. Water quickly percolates away into the foundations. Moreover, trees are sheltered from rain by the walls. For instance, a driving rain from the north is little or no use to a tree planted against the south side of a wall, and the same in respect to other aspects. Therefore good growers never fail to give their trees a good deluge of water during the summer, and even in autumn and winter, too, occasionally, using weak liquid manure at each watering. (3) Injury from frost. It frequently happens that the young embryo fruit is damaged by frost. The damage may not be apparent at the time, and the young fruit may grow afterwards to a certain size before this is found out; but the flowers fail to be properly

fertilised, and as a consequence fall. A good way to prevent damage by frost is to have some portable straw hurdles made to fit closely over the tree, which can be placed in position during hard frost in winter, and removed in open weather and replaced again if wanted. The stem and lower branches of the tree should be bedded down with straw or fresh leaves to the depth of 1 foot. This will protect the stem and roots as well. We have had trees covered up for a month or longer in hard frost, and no harm has resulted.

KITCHEN GARDEN.

TOMATO LEAF (W. J.).—The Tomato leaf shows round, greenish blotches, and has the appearance of having been in an over-moist atmosphere, or of having been fumigated while wet.

TOMATO (A. S.).—The Tomato is attacked by the Tomato black-spot disease. All such fruits should be picked off and burned, lest they spread the fungus *Macrosporium solani*, which is its cause. The plants should have attention to watering so that they do not become dry at any time, and now and then a little sulphate of potash should be given, for that tends to harden the skin and prevent cracking.

CUCUMBERS (C. L. de T.).—The temperature has evidently been allowed to fall too low for the Cucumbers, and they have also apparently been growing in sour soil. No fumigation or spraying can counteract these troubles. The little insects could be killed by fumigation with XI. All, but dusting with flowers of sulphur would be safer in the Cucumber-house. The fruits are gumming badly, and evidently suffering from bad conditions of growth.

CAULIFLOWERS (F. C. T.).—The Cauliflower has been attacked by the Cabbage-root maggot, a pest which is very prevalent this season, particularly in light soils apparently. In some places the whole of the Cabbage crop has been ruined by it. The grub is hatched from small white eggs, very like those of the blow-fly, deposited by a fly very similar to the house-fly on the roots of the Cabbages and other plants nearly related to them, in May onwards, two or three broods being produced in the course of the year. The grubs feed on the young roots and subsequently burrow into the stem. The pest is very difficult to deal with; but possibly the best means is to sow along the rows sand moistened with paraffin. This must, of course, be renewed at intervals, for the fly attacks the plants at all stages of growth.

MANURING TOMATOES (Anxious).—Do not be too hasty in giving your Tomato plants liquid manure. It is very probable that the pots are not full of roots, or the plants have not begun fully to fruit. Too much haste in using liquid manure is apt to generate coarseness, and often disease. To make liquid manure, put eighteen gallons of water into a large tub, then into that a bag containing 50lb. of pure horse-manure; let the bag be coarse and loosely tied. This should soak for forty-eight hours before being used; or you may obtain half a bushel of poultry-manure or of pigeon-manure, with which is added, in a bag, half a bushel of soot, and soak for the same time. Failing either of these, obtain 6lb. of bone-flour, 4lb. of kainit and 2lb. of sulphate of ammonia; mix these and put into a bag. At first it should not be given to each plant more than once a week. A fortnight later give twice the quantity. At the first watering a pint to each plant is ample.

MISCELLANEOUS.

HONEY DEW (C. S. D.).—The black deposit on the Currant leaves is a fungus growing on honey dew. The honey dew is the product of the aphides which have been feeding upon the Currant leaves. The Currant should be sprayed with Quassia and soft soap as soon as the aphides appear. There will then be none of this unpleasant material upon the plants.

EDUCATION IN FRENCH (Enquirer).—Your desire to gain experience of methods of gardening in France and to acquire a knowledge of the French language is laudable. If you write to the secretary of the French Horticultural Society of London, G. Schneider, Esq., 17, Ifield Road, West Brompton, London, S.W., we have no doubt he will help you in the matter.

HOT-WATER PIPES (W. R. H.).—Although it is against all the theories of hot-water fitting to bury the hot-water pipes in soil, we do not see any other remedy for a situation such as yours. If the trench was filled up with soil to a little distance beyond the wall of the fruit-room, and a small space arranged in the flagstones at either end to allow the escape of any accumulated heat, we think the amount which would penetrate through the 3 feet or thereabouts of soil would be so infinitesimal as to do no harm.

JAPANESE TOY GARDEN (F. T.).—In some parts of your country much use is made of the hardy Heaths, and they are very beautiful and free flowering when rightly used. Of such plants you may select at will, since all are good for the purpose. Of small-growing shrubs you cannot do better than select *Abies pectinata* nana, *A. subalpina* compacta, *Pinus Cembra* pumila, *P. Laricina* pygmaea, *Retinospora obtusa* nana, *Cassinia fulvida*, *Veronica* cypripedifolia, *V. Hectorii*, *V. gutierreziana*, *V. pineloides*, *V. carnifolia*, *V. buxifolia*, *V. decumbens* and *V. anomala*, all of which are beautiful. *Yucca filamentosa* and *Y. angustifolia* are both good, and *Genista tinctoria* fl. pl. should not be omitted. Just what you might employ advantageously would depend on the size of the garden and the space at disposal, though for a sun-kissed spot you could hardly err in any section of *Eucalyptus*

Saxifrage, Dianthus Erodium, Campanula muralis, C. zarganica, C. g. alba, any of the silver-leaved Achilleas, Rocky Mountain Columbines, Polygonum vacinifolium and Zauschneria californica would afford variety and variety till quite late in the season.

NAME OF FRUIT.—S. J.—Gooseberry Gunner.

NAMES OF PLANTS.—F. J. Keop.—Buddleia variabilis veitchiana.—D. D. D.—1. Charles Lawson; 2. Amadis; 3. Rosa pomifera; 4. Tuscan; 5. Félicité Perpétue.—W. B. A.—Ulmus glabra—Rhavatt.—Rose Tuscan; the other plant is Veratrum or Black Hellebore.

BOOKS.

A Year's Gardening.*—The title is very suggestive of the book, which in large degree is a calendar of a year's work in the garden and greenhouse, taking the days as they come, and giving hints as to requisite or desirable work in "Greenhouse and Frames," "Vegetable and Fruit Garden" and "Flower Garden." Of necessity, the information imparted is of true calendar brevity, and not always of the best type. For example, on July 1 it is suggested under the vegetables and fruits that the "month be started by collecting together all garden rubbish which may have accumulated." Surely in midsummer there is more important work to be done than this! And should not this department at that time be cropped to its utmost? Parallel advice continues on following days, and if important in its day or right place, is surely unimportant now, when every inch of ground should be occupied. In the main, however, the hints given are good and seasonable, and the gardener, whether amateur or professional, will find the calendar portion useful and convenient for reference. Following the calendar part, a few pages are devoted to alpine, rock and wall gardens, and here the author, while still very brief considering the importance of the subject, gives himself a little more rein, pointing out the wrong and suggesting the right. "Lawns: Their Making, Maintaining and Renovation," "Fruit Trees: Training, Planting and Pruning," "Fruit Destroyers and Garden Pests" and "The Vegetable Garden Month by Month" are some of the features of which the book treats in more or less detail, sufficient, indeed, generally to constitute a guide—a finger-post, as it were, by the way. The book, which contains upwards of forty illustrations, concludes with an alphabetical list of flowering subjects, hardy, tender, bulbous and the like, together with brief cultural hints. So far as we have observed, the book is singularly free from errors, albeit the author falls into the common one—common to catalogue and garden book alike—of spelling *Aubrietia* with one "i" only. We notice, too, that certain generic and specific names are hyphenated together without cause, as, e.g., *Hyacinthus candicans*, page 215, and *Lathyrus odoratus*, page 220, &c. The book is copiously indexed and well got up.

Chrysanthemums and How to Grow Them.†—There are thousands of cultivators of the "Autumn Queen," the amateur gardener devoting much attention to it and succeeding in producing every year extremely fine specimens, both as regards blooms and plants. New varieties are being raised every year, and nearly all require special treatment in order to bring them to perfection. Mr. J. L. Powell, the author, has given a great deal of very useful information in the book under notice. He

has studied the requirements of the beginner, advises him when to commence taking cuttings and how to propagate them. The period of growth under glass, the preparation of the soil, watering, and the science and practice of feeding are all subjects ably dealt with. Chapters are devoted to hints on growing plants to bear exhibition blooms, those for commercial purposes and the raising of new varieties. Insects, diseases and remedies are also dealt with. The chapter devoted to "Cultural Hints Month by Month" is one of the most useful in the book, especially to the beginner, and in a future edition the author would be well advised to extend it and give a few more details relative to the work of each month. The scale of points for judging plants is too high, namely: Equality of size and form of plants, 40 points; excellence of bloom, 35 points; foliage, 25 points; total, 100 points. To a novice this scale of points is apt to be bewildering. A total of 10 or 12 points would be sufficient, and half-points should be given. This part of the book should be revised as suggested. The photographs on page 66, showing the taking of the bud, are not clear enough to convey a conception of the work of bud-taking to a novice. These should be replaced by clearly-drawn sketches or better photographs in a future edition. The other photographs showing good and bad cuttings and how they should be inserted, also those showing how plants should be protected, are very good. The illustrations of individual blooms, specimens and groups in houses are very good and instructive. The author has ably dealt with border varieties as well as those for exhibition, and has given selections of varieties for various purposes. Chrysanthemum-growers will do well to purchase a copy of this useful book and study its contents.

Vines and How to Grow Them.*—The Grape Vine actually occupies only a small portion of this book, which is really devoted to references to a great number of climbing plants. "Climbing Plants and How to Grow Them" would have been a more appropriate title. This work is a fairly exhaustive one, dealing with climbing plants generally, both fine foliaged and flowering, and even Tomatoes are included. The author, Mr. William C. McCollom, deals in a very charming literary style with the uses and habits of Vines, when and how to plant, soil and cultivation, supports and trellises, pruning and management, insects and diseases, winter killing and how to prevent it. These are all very important points in the successful cultivation of Vines of all kinds. The book is lavishly illustrated, many of the photographs showing the different habits of the subjects under notice and their usefulness for covering old buildings, cottages, walls, trellises, pillars and stumps, as well as modern dwelling-houses. For such purposes attention is drawn to the proper use of the herbaceous perennial and the evergreen Vines respectively. Much very useful practical information is given; for example, in Chapter II., "When and How to Plant," the sub-titles are: Time to Plant, Spring *versus* Fall, Depth to Plant, Distance Apart to Plant, Transplanting, Holding Vines Over in Pots, Arrangement of Colours, Time of Flowering, Location. Some idea will thus be obtained of the useful information afforded. At the end of the book a list of Vines for special purposes is given, and also a planting table for Vines. In a single line the following appears relative to the Virginian Creeper: Botanical

name, *Ampelopsis quinquefolia*; common name, Virginian Creeper; height in feet, 50; kind of plant, hardy shrub; time of flowering; foliage Vine; colour of flowers; habit of climbing, tendrils and discs; when to prune, early spring; remarks, dozens of varieties, brilliant in fall. There are fifteen pages of such information given in tabular form respecting various kinds of Vines. This is quite an uncommon book, and will afford a vast amount of pleasure to all who become possessed of it.

Annals: Hardy and Half-Hardy.*—This is the twelfth of the "Present-Day Gardening" series being issued by Messrs. Jack, and of which Mr. R. Hooper Pearson is the editor. It is of a size uniform with those which have preceded it, and is written in a simple, practical style, dealing direct with the plants concerned in a really helpful way. The little volume—it is of about one hundred or so pages—is composed of some light-coloured plates of such typical examples as Zinnias, Marigolds, Sweet Scabious, Dianthus and others, and some five chapters dealing with "The Value of Annals," "Cultivation," "The Most Useful," those of "Less Garden Value" and "Selections," which in their several ways provide just that information which the plant-lover desires chiefly to know. Chapter IV., which treats of those "Annals of Less Garden Value," is of much usefulness—the separating of the chaff from the wheat, so to say—rather than to leave the amateur to flounder amid a host of kinds and varieties of which he knows little or nothing. It does not follow that those of lesser garden value have "neither charm nor comeliness, and no beauty to be desired"—far from it—nor does the author even hint at such a thing. But by placing them apart—setting them, as it were, on a lower rung of Popularity's ladder—the author, by awarding to them a second or third prize as distinct from the first or premier group in the case, has in nutshell form rendered a service to all who would grow these flowers. Too frequently in such books only the best is written of, and, of course, the best is good enough for all. But that that "best" might be secured to all, it is equally important that those plants of lesser value be brought into light, even if in negative degree. This, we are pleased to see, has been done. The arrangement of the plants throughout the book is alphabetical; the most ornamental of the species and varieties are given, together with cultural hints, the generic and popular names of each group appearing at the head. In these and in other ways the author, a well-known horticulturist and journalist, has done his part well. In a prefatory note we are rather surprised to see allusion to *Campanula pyramidalis* as an annual, the plant being of strictly perennial duration, often seen as a border subject and flowering annually. The plant, however, has a great decorative value if treated as a biennial. We have never seen it to be of service as an annual, and, indeed, it is not mentioned at page 27 among those of annual duration. We note, too (page 30), that the beautiful varieties of Corn Marigolds (*Chrysanthemum*) Eastern Star, Evening Star and others introduced by Messrs. Sutton are referred to *C. carinatum*, though obviously there is much external evidence of *C. segetum*. Such things are mere details, however, and in no sense diminish the value of the useful volume before us, which we commend to all flower-lovers.

* "A Year's Gardening," by Basil Harrave. Price 6s. London: Werner Laurie, Clifford's Inn, E. C.

† "Chrysanthemums and How to Grow Them," by J. L. Powell. Published by William Heinemann, London. Price 2s. 6d.

* "Vines and How to Grow Them," by William C. McCollom. Published by William Heinemann, London. Price 2s. 6d.

* "Annals: Hardy and Half-Hardy," by Charles H. Curtis; price 1s. 6d. London: T. C. and E. C. Jack. 67. Long Acre.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Garden Plans Competition.—In connection with the advertisement for plans for a small garden, which appeared in our advertisement pages some time ago, we are asked to state that the winner of the prize offered was Mr. Hugh R. Dixon, 73, Corringham Road, Golder's Green, London, N.W.

Phlox Frau Antoine Buchner.—This pure white Phlox has appealed to one very strongly this season, as much by reason of its handsome panicles as by its purity and good form. It is one to be noted for planting a little later, and, given good culture, will disappoint no one.

Roses in London.—It is by no means an uncommon expression to hear that Roses will not succeed in London, but this is not always borne out by facts. Just now in Hyde Park there is a bed of that grand variety Caroline Testout in first-rate condition, there being a good sprinkling of expanded blooms and a fine crop of buds to follow.

A Beautiful Clarkia.—When visiting the trial grounds of Messrs. Sutton and Sons at Reading a few days ago, we noticed a new Clarkia that is worthy of special mention. This is named Sutton's Double Scarlet, this name being derived from the colour of the flowers, which are a most pleasing shade of glowing rosy scarlet. It has a dwarf, compact habit, and each plant is freely branched, so that it is an excellent subject for the garden as well as for cutting. Grown in pots for greenhouse decoration in spring, this Clarkia would be very charming indeed.

Godetias as Cut Flowers.—Although Godetias are among the most prized of our hardy annuals for garden decoration, we do not remember seeing their merits as cut flowers brought to notice. Owing to the fact that the buds open well in water, Godetias last in good condition a long time when cut. We have had sprays of Lady Satin Rose and Double Rose, a beautiful pink variety, in water for ten days, and they are still quite fresh and pleasing. They are so easily grown from seed, which may be sown in autumn or spring, that they ought to find a home in every garden.

A Little-known Bulbous Plant.—One seldom sees the Puschkinias in flower in the garden of the average amateur. This is probably because one rarely finds a reminder of these little bulbs about the ordering-time, and this is our reason for penning this note at present. They are dainty Scilla-like flowers of graceful growth, as a rule, and of a pleasing white lined with a pretty blue. Of the few species, the one most usually offered is *P. libanotica*, of which there are two forms, *P. libanotica* itself and *P. l. compacta*. The latter is the more prized, but we are not sure

that we do not prefer the type, which has looser flowers. *P. scilloides* is sometimes offered, but one finds the names frequently interchangeable among bulb-dealers. The chief enemy of the Puschkinia is the slug, and bulbs should be planted in light soil about an inch or two inches beneath the surface.

A Notable Bedding Arrangement.—A tone of colour which has caught on with the fair sex of late is a peculiar yellowish terra-cotta. There is now in Hyde Park a couple of beds of a form of *Celosia pyramidalis* which is of just the fashionable tone of colour, and is thereby much admired. It is labelled *Celosia pyramidalis aurea*, but is of a distinct tone from the golden form usually met with. The plants are alternated with small examples of *Kochia scoparia*, and the bed is carpeted with blue *Lobelia*. The general effect is uncommon, but at the same time attractive.

Mesembryanthemum uncinatum.—In many directions this year, in Southern gardens, this pretty plant is flowering profusely, and it is as welcome as a flowering plant could be. The rosy pink flowers which terminate the branches are only rarely seen, and doubtless the great heat of the year 1911 has contributed not a little to their appearing now. The species is of shrubby habit and the whole plant of a glaucous blue, and when planted in a position of full exposure is quite welcome, even without flowers. It is well suited for the rock garden in the sunniest places.

A Beautiful Blue Alpine.—*Wahlenbergia vincaeflora* or *gentianoides* has been certificated under both names during the past few weeks, and is worthy of a note now (mid-August) because of its late flowering, a flowering which began in June and has never abated. Could any lover of alpines wish for more in a slender and graceful plant whose deep sky blue bell-flowers appeal to all? It loves a cool, sequestered spot, and looks exceedingly happy springing from a thin colony of the dwarfest of the crested Hart's-tongue Ferns, the dark green fronds being in delightful contrast to the rich blue flowers.

Campanula Stansfieldii.—This is one of the most valuable and easily grown of the late-flowering Bellflowers of lowly stature. Less dwarf than *C. pusilla* or *C. pulla*—for the plant may on occasion reach to 9 inches or so in height—it is yet of the pigmy class whose growth is of an ascendant character as opposed to those which trail. Pot-grown examples may have the horizontally-disposed bells of purplish blue dangling over the rim of the receptacle named, and very well they look. The plant is a profuse bloomer and most welcome in August. Culturally it might be suggested that it delights in a cool spot, where in sandy loam it will be quite happy.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Thalictrum dipterocarpum.—This is by far the most beautiful plant I have now in flower. It is about three years old, is over six feet high, and has flowers freely produced on longish stalks from the bottom of the plant. It is a most graceful plant, with its long, lavender-coloured flowers. I grow it in a rather damp and sheltered situation, though it has plenty of sun. It seeds and germinates freely, is easily reared and is quite hardy.—**GEORGE DIXON, Astle, Cheshire.**

Sweet Pea King White.—Although this fine new white Sweet Pea is not yet supposed to be "sent out," it has been exhibited in competitive exhibits this year, and, should it continue to show the same form, it will probably hold its own for a long time. As the writer has seen it exhibited it is a very fine flower in every way, and one which is likely to please all who like a white Sweet Pea—and who does not? I must say the name does not appeal to me, but that is nothing in the case of a lovely Sweet Pea suitable for all purposes.—**A. M. D.**

Eucalyptus globulus.—It is interesting to note that there are two fine trees of *Eucalyptus globulus*, commonly known as the Blue Gum tree, growing on the front of the Ilfracombe Hotel, Bournemouth. Both are long established, and have to be cut back each year owing to their rapid growth over the windows. They are about forty-five feet in height, of very good colour, especially the lower limbs, and very strongly scented. A little stream runs about fifteen yards from their base, into which they have thrown out their roots. They face full south, but are only slightly sheltered from the east winds.—**W. A. BATTERSBY, Bournemouth.**

Roses with Bad Habits.—The writer of the series of articles on this subject deserves the thanks of everyone who has experienced the difficulty of wading through long lists of names in the endeavour to find out a few that will give the best returns for garden decoration. With regard to Mrs. R. G. Sharman Crawford, my opinion is entirely at one with that of your correspondent, and though I have had some beautiful blooms, it is so liable to mildew that it will have to go. General Macarthur, too, is this season nearly as bad with mildew as the other, and on this account alone I am seriously considering its banishment. Killarney also gives a lot of trouble in this respect. Roses that hang their heads are also a nuisance in the garden, however fine the blooms may look when they are on the exhibition table—the worst of all places from which to make a selection of garden Roses. The fact is that Roses are now far too numerous, and an article from someone, such as your correspondent, on "Too-much-alike Roses" would be of great service to many.—**H. P.**

Judges Judged.—While the consensus of opinion as given on page 410 of *THE GARDEN* conforms to the principle set forth by Mr. John Wright, V.M.H., that "a judge must act strictly within the wording of the schedule," which judges of experience never for a moment doubted, I should like to add a further word as to recommending prizes. At the Sweet Pea Show what surprised me most of all was that the judges, immediately following their wholesale disqualifications, should append, or cause to be appended, to the class card a smaller one bearing a legend "recommending"

the prizes to the adjudged premier exhibits. This, of course, is a totally different thing to recommending "special" or "extra" prizes in certain cases where disqualification had been rendered necessary through error or oversight. In the two classes to which these minor cards were attached the prizes were offered for exhibits under emphatically-laid-down rules and regulations, and the judges in recommending the original prizes at all far exceeded their powers.—**E. H. JENKINS.**

— I have read Mr. Horace J. Wright's letter under this heading on page 386, issue August 3, and also the opinions expressed on the point by several eminent judges on page 410, issue August 17. I observe that the unanimous verdict is in favour of Mr. Wright's contention. My voice will be but as a whisper in the desert, I know, because I cannot aspire to such fame as the men who have already written. However, may I say a word for the judges who are alleged to have erred? Than our gardening judges none could be fairer; it is immaterial to them who wins or who loses. They do their duty without thought of pleasing or displeasing this or that exhibitor. But when it comes to the question of wholesale disqualification, as in the case at the National Sweet Pea Society's Show, out of which this controversy has arisen, I think that they are right to pause. I praise them for it. The rule was there, "double standards will disqualify." Did any of the exhibitors knowingly put in flowers with double standards with the deliberate intention of defrauding the society? I say, most emphatically, "No, not one of them." Should they, then, all be punished in the severest manner known in the show tent? Again I say "No." Had the judges thought the intentions of the exhibitors were bad, they would have had to disqualify; but accepting my view that the double standards were there in simple error, they took the lenient and, in my opinion, correct course. To adhere strictly to the letter of the law in such a case is to take too high a hand. From his notes in a previous issue of *THE GARDEN* I gather that Mr. Horace Wright has not forgotten an earlier occasion of disqualification in the history of the Sweet Pea Society. Does Mr. Wright know that his arbitrary action in insisting upon the rules being strictly interpreted almost wrecked the society on the threshold of its useful and prosperous career?—**H. R. H. T.** [We understand that the committee of the National Sweet Pea Society will not accept the judges' recommendations that prizes be awarded to exhibits containing double standards.—**ED.**]

Roses Lady Gay and Dorothy Perkins.—My experience of Lady Gay and Dorothy Perkins is exactly the same as the Scotch gardener's described by "Sub Rosa" in *THE GARDEN* of August 10, page 398. Dorothy Perkins grows strong and well, and bears beautiful large trusses of deep pink blooms, each bloom double the size of my Lady Gay, which comes paler, smaller, and does not look healthy in the foliage either. It is in rather a hot, dry position, and perhaps this may be the reason, for a neighbour of mine close by here finds, like "Sub Rosa," that Lady Gay does best for her in every way. I wonder whether the growers always name them rightly.—**ESSEX READER.**

— Several years since I planted some Roses of the variety Lady Gay from pots. These Roses were not very healthy when planted, but good soil was prepared for them, and it was thought that they would quickly root into this and improve in appearance. Our expectations in this respect

were, however, not realised. The plants made but poor growth, and this was not at all robust. The foliage was weak and sickly. I attributed this at the time to the plants being raised from unhealthy stock and grown rapidly under glass in strong heat. (It was soon after the Rose was in commerce.) Rose Dorothy Perkins, purchased at about the same time and from the same firm, was in every way satisfactory. I think Lady Gay is more robust, and produces a more uniform supply of flowers when budded. Own-root plants of this Rose should, if grown at all, be propagated from only the very best and strongest shoots. Dorothy Perkins can be grown on its own roots with every success. My experience has also been that the latter Rose will succeed in soil too poor to produce good flowers on Lady Gay, while the latter will grow and flower profusely without the amount of sunshine which seems absolutely necessary to the welfare of Dorothy Perkins.—**C. R.**

Laburnum alpinum.—I think "B." issue page 399, is quite right in calling attention to this Laburnum. The reason, perhaps, why one does not meet with it more frequently in small gardens is that its good qualities are unknown, and the common Laburnum is, of course, always sent out by nurserymen when a Laburnum tree is ordered, unless a special variety is asked for by the purchaser. In addition to the good qualities of the Scotch Laburnum mentioned by "B.," an important point with many having gardens by the sea or in exposed positions is the hardness of this variety. I can recommend Laburnum alpinum as a plant to grow by the sea in moderate shelter. The pyramid form is the best to plant, and the trees must be staked and made quite secure at the time of planting. It is almost impossible to secure standard trees in very exposed places. It is much better to start with small trees. The Laburnum is not fastidious as to soil, but prefers a good loam and thorough drainage.—**COLIN RUSE, Lambay Island, Rush, County Dublin.**

A Good Culinary Pea.—In reference to Mr. C. Turner's successful experience with, and recommendation of, the culinary Pea known as Veitch's Prestige on page 398 of *THE GARDEN* for August 10, I may perhaps mention the success I have experienced this year with a variety introduced by Messrs. R. Veitch and Son of Exeter and known as Western Express. This and another variety sent out by the same firm called Glory of Devon received awards of merit from the Royal Horticultural Society, the first in 1902 and the second in 1899. I have grown both kinds, and consider the flavour of Glory of Devon somewhat better than that of Western Express, though there is very little to choose between them, for both are excellent. Western Express is classified as one of the first-early sorts, and Glory of Devon as a main or middle crop Pea; but this year I have grown the former variety only, making three successional sowings, the first at the end of January and the others followed by intervals of two or three weeks. The rows ran north and south, so that the plants got the full benefit of what sun there was, and of rain there has been no lack. All the sowings bore an abundant crop of large pods containing on an average nine large seeds, but a good many of the pods bore ten seeds, so that the yield on shelling was very great. This, combined with the heavy cropping and the continuous supplies of the successional sowings, left no desire for growing other kinds.—**J. R. J.**

THE FLOWER GARDEN.

THE SPORTING OF CALIFORNIAN-GROWN SWEET PEAS.

Fremontia californica.—This is a fine shrub which deserves to be planted more freely in slightly-sheltered positions, for when seen with its numerous showy yellow flowers it is indeed a grand sight. It was originally discovered by Colonel Fremont in 1846, and the first plant to flower in this country was raised from seeds collected by Mr. Robert Wreneh, who sent them to the Chiswick gardens of the Royal Horticultural Society. Eventually, William Lobb secured seed, when plant-collecting in California, and from these a number of plants were raised, which were in due time put into commerce. Propagation is effected by cuttings, which are placed in sandy soil and kept under a bell-glass till rooted. At East Burnham Park, the country residence of Sir Harry Veitch, it is planted against a wall, where it is allowed to grow naturally, and not treated in the same way as most shrubs in a like position. Under these conditions it flowers annually.—S. T.

Snapdragons and the Rock Garden.

—The little note on this subject in your last issue (page 409) serves to remind one that there are at least two alpine *Antirrhinums* invaluable for planting in the rock garden. One of these, *Antirrhinum glutinosum*, is a low-growing or trailing species found growing wild in the Spanish mountains. The flowers, which are of a dull yellow, are produced in July and August, when most alpine plants have long completed their good display. The other species, *A. sempervirens*, is even more attractive, and flowers about the same time. It is a native of the Pyrenees and readily adapts itself to cultivation, as is clearly evidenced by the free-flowering colony shown in the accompanying illustration.—SPARTAN.

Zonal *Pelargonium Maxime Kovalsky*.

—A bed of this *Pelargonium* at Hampton Court arrests attention, especially at a little distance, by reason of its distinct tone of colour, which is a kind of 'yellowish scarlet or soft orange, difficult indeed to describe, but very attractive. Like many other good kinds—Paul Crampel, for instance—it was distributed some years before its merits were recognised, as it was sent out by MM. Lemoine et fils of Nancy in the spring of 1906,

and was given an award of merit by the Royal Horticultural Society last year. Apart from its value for bedding purposes, it makes a good pot plant, as the flowers, which are borne in large trusses, are of good shape and possess a certain air of refinement. Taken altogether, it is one of those varieties which, if not already grown, may well be noted for future additions.—H. P.

FORTHCOMING EVENTS.

August 27.—Royal Horticultural Society's Exhibition at Vincent Square, Westminster. Lecture at three o'clock on "Recently Introduced Water Lilies" by Mr. J. Hudson, V.M.H.

August 29.—Warkworth Horticultural Society's Show. Sandy Flower Show.

August 30.—Dunfermline Flower Show (two days). Highland Horticultural Society's Show.

August 31.—Flower Shows at Whaley Bridge, Jedburgh, Melrose and Symington.

DURING the present year there have been numerous complaints about the sporting of Sweet Peas, or, rather, many who have grown them have bluntly stated that the stocks were mixed, and naturally attributed the trouble to the carelessness of the vendor. Under the circumstances it was not unreasonable to do so, because such varieties as *Etta Dyke* and *Clara Curtis*, which have hitherto come absolutely true, have been giving a large percentage of rogues. Knowing as we do the vast amount of trouble that all reputable growers of Sweet Peas take over their stocks, we could not countenance such suggestions; and after making

matter a little further, this theory will not hold water.

There are two facts that induce us to arrive at other conclusions. One is that practically all varieties with mauve, lavender and various shades of blue flowers come as true, and in some instances more so, from Californian-grown seeds as from seeds saved in this country. Now, if the seed-growers in California were careless over some varieties, and allowed them to become mixed, it is only reasonable to assume that they would sometimes be lax with the blues.

Another, and even more convincing, point is that although the seeds may all be true, the resultant plants give the percentage of rogues already stated. Take, for instance, the two varieties *Etta Dyke* and *Clara Curtis*. It is well known that both have cream-coloured seeds, yet, although all the seeds may be this colour, the plants from Californian-grown seeds give a number of coloured



A BEAUTIFUL ALPINE SNAPDRAGON (*ANTIRRHINUM SEMPERVIRENS*).

enquiries in several directions, it would appear that the whole trouble is due to Californian-grown seeds. It is, of course, well known that a great many Sweet Pea seeds offered for sale in this country are grown in California, where the climatic conditions are usually much better for seeding Sweet Peas than in this country, a perfectly legitimate proceeding so long as stocks can be retained true.

We have seen instances during the last few weeks of Sweet Peas that were true when sent out to California to be grown, yet when the seed from these plants was grown in this country it gave from 10 per cent. to 15 per cent. of rogues. As already stated, this has happened with such varieties as *Etta Dyke* and *Clara Curtis*, which invariably come true in this country. The natural conclusion that the layman would come to at this stage is that the trouble is due to the growers in California, who have allowed the stocks to become mixed at seeding-time. But when we investigate the

flowers which, if due to mixing at seedtime, should have had dark-skinned seeds. To carry this a step further we may mention that seedlings of *Etta Dyke*, when 3 inches high, showed dark tendrils and axils of their leaves—a sure indication that they would not produce white flowers—yet, when they were lifted, the seed that was still adhering to the root-stem had a white integument. Although all the seeds sown were of the true colour and shape, the resultant plants gave maroons, mauves, and several other colours of which even a novice could detect the seeds before sowing were it a case of mixed stocks.

The above facts, then, force us to one of two conclusions. There must either be something in the soil or climate of California that induces certain varieties of Sweet Peas when grown there to break or sport the following year; or there must be some insect or other agent, unknown in this country, which effects cross-fertilisation. The latter theory would appear the more feasible of the two. A

keen grower of Sweet Peas tells us that Major Hurst, who has had charge of the northern trials of the National Sweet Pea Society this year, has proved that if flowers of white or cream coloured varieties from separate plants are crossed, they will in some cases give a percentage of red or purple flowers, thus indicating that colour factors for red and blue may be lying dormant in those varieties. The whole subject is one of the greatest interest, not only to the grower of Sweet Peas, but to the seedsmen who sell them. If any of our readers can throw light on the matter, we shall be pleased to publish their letters, but we hope they will condense them as much as possible.

BULBS FOR AUTUMN PLANTING.

(Continued from page 416.)

Snowdrops and Winter Aconites.—I believe the whole secret of success with Snowdrops and Eranthis is never to let them get dried up. Anemone blanda, and apennina, too, lose some small fraction

never have I seen enough of it in any garden; and many still lack *G. byzantinus*, a robust beauty that, if planted in August in cool but not sodden soil, will flower from mid-December till February; 5s. 6d. will give us a garden picture of 100 of these lovely Snowdrops during that dullest of periods, and in most gardens it settles down and increases happily from year to year if planted early. *G. Ikarie* is quite opposite in character from the last, in that it flowers after most other Snowdrops, producing its great drop-pearl-shaped flowers above wide, deep green, Scilla-like leaves in March. Be firm with yourself, and mark and order both of these at once. If you are starting off for summer holidays, order just the same and select their places in the garden, putting in a label and instructing your gardener to plant them there *immediately* they arrive.

Crocus is the family that next suggests itself, and here a little outlay will bring you great joy. *C. speciosus* costs 3s. a hundred, and I cannot believe the money could be better spent. It is the least particular, as to situation, of all the Croci, and

with white anthers and rich orange markings in the throat; a good grower in sunny nooks. *C. Salzmanii*, from Southern Spain and Morocco, is yet quite hardy here, and a very robust plant, giving large lilac flowers in October. *Zonatus* generally sends up a few blooms in mid-September, and continues till October is middle-aged. It is very easy to grow, a rapid increaser, and is of a silvery pink colour that is peculiar to itself. When these kinds are passing away, *C. longiflorus* comes into bloom, with its fragrant rosy lavender flowers. I am very fond of it, as it makes a wonderfully good mass if left alone for three or four years, and flowers so freely that it is one of the most effective of all when open in the sunshine.

There are many others worth growing—*asturicus* in several varieties, light or dark purple; *nudiflorus*, so plentiful in the Pyrenees that almost any plant you dig up brings corms of the *Crocus* with it, yet not often to be found in lists. But when found at a reasonable price it is quite a plant to acquire. Its large flowers are of a fine blue-purple and very handsome. *Medius* is not often seen in gardens, but half-a-crown will buy a dozen, and a dozen of its rosy lilac stars, wide open, showing the exquisitely pencilled throat and the rich scarlet stigmata like tassels of silk, will set you to saving up another half-a-crown or two for a further purchase another season. All these I have mentioned are reliable hardy kinds that should grow well in any garden worthy of the name. I cannot write any more, for it is time to practise what I preach and make out my orders for early planting.

E. AUGUSTUS BOWLES.

SEASONABLE NOTES ON AURICULAS.

Enemies.—Although it cannot be said that the enemies of the Auricula are numerous, they are persistent, and if left alone they will quickly ruin all the choicest plants in the collection. The grower who would achieve the greatest success must be prepared to give regular attention to the plants,

so that if an enemy does put in an unwelcome appearance it may be killed before it has had a chance to do material injury. The time demanded will not be much, provided that the examinations are made at frequent intervals and that they are thorough.

One of the worst pests, if it be not quite the worst, is the small grub that bores a minute hole in the bud and forthwith commences to eat out its centre. There is nothing effectual in regard to this other than incessant searching, and, as the hole is very small, close watch alone will reveal the presence of the enemy. When one is found, it will require no suggestion from me that it be immediately killed. It must be emphatically understood that this is an enemy which does not delight to show itself, but one that works insidiously, and must be sought for day by day.

Then it is well within the bounds of possibility that both slugs and woodlice are present in the garden, and if they can establish themselves comfortably in the Auricula-frame, they will do so and play serious havoc among the plants. Instant



PRIMULA MOLLIS, A LITTLE-KNOWN GREENHOUSE SPECIES FROM THE HIMALAYA. (See page 425.)

of vigour for every half-hour they are above ground, and I have never yet seen a garden that held too many of these treasures. Now, we will take such lists as Van Tubergen's from Haarlem, Barr's from nearer home, and T. Smith's from Newry, Ireland. What will the wise gardener mark for present planting? Zeal will mark much, discretion limit those marked to match planting space, and then, alas! the purse will have to cut numbers down to those it can provide coins for. *Eranthis hyemalis* costs 1s. 6d. per 100 from Holland. All should mark that with indelible ink, and the lover of strange plants might pencil a mark against *E. cilicica*. A dozen at 9d. are worth a nook in the rock garden or under a deciduous shrub, such as one of the choicer new *Deutzias*, for they flower when the old Winter Aconite is passing away, and their red stems and more finely-cut Toby-frills make a pleasant contrast with the older plant. The Snowdrop or *Galanthus* clamours next for early planting. I need not say anything in favour of the common single Snowdrop—it is, surely, too well known and loved to need my praise—but

will live and flower even under the shade of trees. Its flowers are large and stand up well, and are as blue as any known *Crocus*. The groundwork of most forms is really best described as blue, not *Nemophila* or *Delphinium Belladonna* blue, of course, but much bluer than many *Campanulas* that are so described. Then it is veined with a wonderful branching pattern of purple-blue veins, and outside, at the throat, is freckled with purple, and the stigmata are of a rich orange yellow that contrasts in a delightful way with the surrounding blues. On a sunny day in late September or early October a clump of *C. speciosus* is as lovely a sight as one can ever hope to see in an English garden. They multiply rapidly in warm, well-drained borders, both by seed and by tiny offsets, after the style of the "spawn" of *Gladiolus*. The variety *Aitchisonii* is very large—one of the largest flowers in the *Crocus* family, in fact—and of a pale lavender blue, and flowers rather later than the type. There is also a white form that is good. *C. pulchellus* is another inexpensive and delightful one to plant, of a charming cool lavender shade,

death must be meted out to them if progress is to be satisfactory. The woolly aphid, which encases itself round the collar of the plant, will cause death unless it is promptly brushed away. As far as my experience goes, it is impossible to prevent this pest, no matter how admirably, intelligently and carefully the plants may be managed, and one must, therefore, be constantly on the watch for it to ensure its removal before it can have done substantial injury to its host.

Potting.—If all work in connection with the potting has not yet been accomplished, it ought to be put in hand and pressed forward to completion in the shortest space of time conducive to carrying out the details with proper care. If it can be made convenient, pots which are exceptionally deep in proportion to their diameter must be given the preference, as the Auricula prefers to drive its roots downwards rather than curl them round the sides of the pots, as is the habit of many plants grown in our greenhouses. Fearful and wonderful mixtures of soil were supposed to be essential to success with Auriculas in the days of yore, but modern ideas are different, for they rule that the plants thrive best when a compost of sweet, plain food is provided, and there is nothing superior to the finest fibrous loam, with perhaps a little of something to open it if it is much on the strong side, to bring satisfaction. Watering is always a matter that demands thought and care, and especially so immediately after potting, when the roots have not had time or opportunity to secure a hold of the fresh material. An excess then will spell souring, and it will require the utmost attention again to restore the plants to good health. On the other hand, dryness to the point of dustiness will also spell disaster, and the cultivator must, therefore, strive assiduously to find the happy medium—pleasant moistness.

Plants Growing.—In favourable conditions many plants are now making steady advance, and it is wise to encourage this by every means. Give water before the soil becomes really dry, and test the pots at least thrice a week to see that a further supply is given at precisely the moment when it will do most good. Any leaves which show the slightest signs of decay ought to be at once removed, as the trouble will inevitably spread unless this is done. The surface of the soil in the pots should be gently pricked over to keep it open at all times, as this facilitates and encourages the admission of fresh air. This goes far to maintain the roots in excellent health, and the soil in sweet condition. F. R.

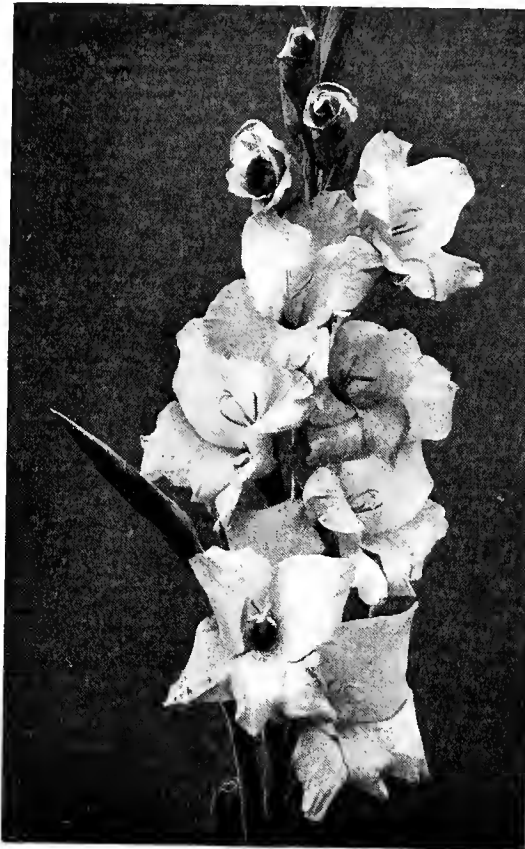
A NEW GLADIOLUS.

Wonderful improvements have been wrought among late-flowering Gladioli in recent years, and this fact was forcibly brought to our notice at the recent exhibition of the newly-formed National Gladiolus Society. Many novelties of sterling merit were shown on this occasion. On this page we illustrate one of the latest creations, named Crown Jewel. It is a strong-growing variety, bearing exquisite spikes of salmon pink flowers with a yellow blotch on the lower petal. This novelty was shown by Messrs. Kelway and Son, Langport, and recently received an award of merit from the Royal Horticultural Society.

THE GREENHOUSE.

PRIMULA MOLLIS.

THIS half-hardy Primula deserves more extensive cultivation. It is easily raised from seed, and makes a beautiful foliage plant. The large lobed leaves are heart-shaped. The margins are waved, notched and roundly toothed. They are soft and velvety to the touch, and the rich green surface, being densely covered with soft, silky hairs, gives the plant a very striking appearance. The long leaf-stalk is also pubescent. The calyx in shape is like an inverted cone, and of an intense red colour; it is also hairy. The lobes are acute. The flowers are borne in umbels (three



A NEW GLADIOLUS; CROWN JEWEL.

to five) on a long hairy scape. The corolla, rose-coloured, stands well out beyond the calyx. The photograph reproduced on the previous page was taken by Miss Amy Cameron, Trinity, Duns.

Morelands, Duns.

JOHN MACWATT.

MALMAISON CARNATIONS.

(Continued from page 413.)

Watering.—It is perhaps here more than anywhere that that fineness of judgment so impossible to impart, yet so essential to success, is so desirable. Soils and temperatures are definable in words, while water and its application to such plants depends not only upon the latter, their size and vigour, but upon the season, upon environment and many other things. That the Malmaison Carnation is peculiarly sensitive in the matter of

watering, and quickly resents an overdose of it, all cultivators know quite well. Careful watering, therefore, is a matter of great importance at all times, and during autumn and winter the plants may go for days without requiring any. To some extent watering may be regulated by the active growth or otherwise of the plants, but in no case should water be afforded in dribbles or medicinal doses. If a plant is dry, water it thoroughly, *i.e.*, give it sufficient to moisten the entire body of soil, after which let it become dry again before any further supply is given. We take our meals at stated intervals; we drink when we are thirsty; and plants should be catered for in like manner, and studiously withal.

Potting On.—A solitary layer produces in the first season of flowering a single stem, and, if sub-budded, one large flower and around the base of the stem several shoots, each of which if retained would flower the following year if the plant be potted on. This second potting is called a "shift" in garden parlance, and differs in no wise materially from the earlier potting into 6-inch pots. The same soil mixture and similar precautions must be observed throughout, together with extra staking as required. The potting of the old plants should be done very soon after the flowering is over, providing the plants with a liberally large pot at the time. Few plants probably among soft-wooded subjects are of a more exacting nature than Malmaison Carnations, and a full measure of success is only meted out to those who attend to cultural details for twelve months of the year.

THE ROSE GARDEN.

BEST ROSES OF THE YEAR IN A SCOTTISH GARDEN.

LAST year we had a very fine show of Roses, but owing to the great drought and heat the blooms were very thin and ephemeral. At the same time, the wood, if less robust than usual, was beautifully matured, and in no previous season have the plants come so well through the winter. For the first time in a fairly long experience I did not find a single dead plant, and we cultivate, roughly, seven hundred or more. The spring here was exceptionally dry, only 1.78 inches of rain having fallen during April and May. June was very wet, which, however, just suited the Roses, as in this late upland district we can never have blooms of Hybrid Perpetuals and Hybrid Teas until July. Our only advantage is the possession of a good stiff loam and an abundance of stable-manure, and these are, of course, valuable assets when growing Roses. The first three weeks of July were, on the whole, fine, and the first crop of blooms was in grand condition. Without exaggeration, I have never seen a finer lot of Roses anywhere, and certainly 1912 has been by far the most successful season we have ever had here with the Queen of Flowers. I will now mention a few of the very best varieties for this cold district, in the hope that it may be of some interest to others who have a similar late locality to contend with.

General Macarthur.—Certainly the finest dark red garden Rose. This year the blooms were of

enormous size and gorgeous colour. It is delightfully sweet, has grand foliage and promises a very fine autumn display.

M. Paul Lede.—One of the finest light Roses I know. Slightly variable in colour; sometimes this rivals a fairly good Lyon. Why is this fine Rose so much neglected?

Lyon.—Much finer than ever before. As the plants age, the habit seems to improve. Always best in dull weather. Withstands rain fairly well.

Mme. Ravary.—The best yellow Rose here. A free and constant bloomer. Best in dull weather.

Juliet.—A fine grower, but rather shy bloomer with us. The colours are unique.

Marquise de Sinety.—Glorious colour, large flowers, but shy bloomer. It has grand foliage, but a rather straggling habit.

Lady Ashtown.—One of the best pink Roses. This season the colour was deeper and brighter than ever before.

Viseountess Folkestone.—This old favourite has fairly excelled itself this season.

Fran Karl Druschki.—Very fine indeed on a south wall, but, being later than the majority of bush Roses, was caught before opening, where grown as a dwarf, by mist and rain.

Mrs. W. J. Grant.—Finer than ever before. A delightful Rose when it succeeds, as it has done this summer.

J. B. Clark.—Wonderfully fine this year. Even as a dwarf is flowering freely and giving very large, perfect blooms.

Ulrich Brunner.—Very fine indeed. This variety never fails. It withstands damp better than most.

Salamander.—One of the brightest red Roses we have. Has been extra good this season.

Pharisaer.—Very fine indeed.

Mrs. R. G. Sharman Crawford.—Particularly fine. What a pity this Rose is scentless.

The last two are not yet (August 5) in bloom, but promise to be finer than ever before. Shower of Gold is a lovely thing and flowered freely, although only planted last autumn. C. BLAIR.
Preston House Gardens, Lintlithgow.

ROSES WITH BAD HABITS.

(Continued from page 412.)

Richmond is very deficient of petals, much more so than Liberty, and although it is perhaps a better grower, it does not please me so much as the old favourite. Until we have a better, Richmond will no doubt be planted largely, but I would advise all planters to be chary of accepting the glowing accounts of some Continental novelties said to be superior to Richmond and other reds, for my experience is that they are not.

Homere is almost a Rose of the past. We could endure its malformed flowers before we had so many lovely Hybrid Teas, but now it is not worth the space it will quickly occupy, for it is a prodigious grower. Going through the village of Hockley in Essex recently, I should think ten out of every twelve Rose plants seen were Homere, and they made no appeal to me, being devoid of colour and form, although I grant at times it is very pretty.

Dr. O'Donel Browne is much too vigorous to plant with ordinary Hybrid Teas, as a plant of it would spoil any arrangement where compactness of growth is desired. The same may be said of

W. E. Lippiatt, both superb in their individual bloom, but too near the Hybrid Perpetuals in growth to make good Roses for planting with the ordinary Hybrid Tea. I think it will soon be time to grade the various Roses according to growth, so that the planter may know just what to expect, and I would commend this suggestion to the publications committee of the National Rose Society. Such another Rose is

Mrs. James White, a very nice variety, but far too vigorous unless we treat it on the same lines as we do Mrs. Stewart Clark and such-like, that is, as pillar Roses or as free bushes. The ordinary Rose catalogue

does not differentiate between such Roses, which are described as being vigorous, with, say, Laurent Carle, which also is vigorous, but not of the rampant half-climbing order.

Mme. Melanie Soupert will yield quite a number of very uninteresting open blooms, although the buds and half-open flowers are so lovely. Of course, we can cut these off, but I think it is a fault in a Rose when it does not finish well.

Mrs. Arthur E. E. Coxhead is a superb Rose in every way save colour, and even this at times is all right, but generally it is a shade that fails to appeal to most individuals. The same may be said of

Exquisite, a most beautifully-formed Rose and of delicious fragrance, but the colour of the older flowers is of a dull magenta shade. I have seen this Rose superb in colour as well as form, but it possesses the bad habit alluded to.

Coming now to a few of the Rambler section, I think it is a pity raisers choose to ally unappropriate



A VIEW IN MR. ARNOLD WEISS' WATER-SIDE GARDEN.

Hugh Dickson.—A grand dark Rose of most exquisite perfume. A fine grower, with good foliage.

Mrs. John Laing.—Better than ever before, but, lately, spoiled by the rain.

Mme. Melanie Soupert.—A magnificent pale Rose. When half expanded the colouring is exquisite, and even when fully open most telling in the garden.

Captain Hayward.—Still one of the best dark Hybrid Perpetual Roses. A particularly free bloomer and highly perfumed.

Liberty.—Particularly fine this season. The blooms, if rather small, are of good substance and the colour brilliant.

Killarney.—Better than ever, and, so far, free from mildew.

Caroline Testout.—Still unbeaten as a pink garden Rose. Very fine indeed this season.

Clara Watson.—Colour and size of bloom much better than usual. A grand pale Rose.

Gustav Grunerwald.—Better than ever before. A really good Rose.

While the foregoing have been the cream of the collection this year, the following have also been good in every way: Le Progrès, S. M. Rodocanachi, Marquise Litta, Prince de Bulgarie, George C. Waud, Richmond, Mrs. David McKee, Mavourneen, Helen Keller, Dr. Andry, Frau Peter Lambert, Jeannie Dickson, Margaret Dickson, Paul Neyron, General Jacqueminot, Alfred Colomb, Betty, Exquisite, Gladys Harkness, Hugh Watson, La France (letter than for several years), Mme. Isaac Pereire, Mrs. Aaron Ward (very fine), and York and Lancaster.

Climbing Roses.—The best this season are Hélène, Una, Dundee Rambler, Ards Rover, Mme. Isaac Pereire, Climbing Caroline Testout, Grüss an Teplitz, White Dorothy and Dorothy Perkins.



THE PAVED ROSE GARDEN AT DRYNHAM, OATLANDS CHASE.

names with some of these. For instance, Longworth Rambler does not ramble in the ordinary sense of the word, and if any have planted it to cover an arch, they will have to wait. The same may be said of

Ards Rambler, a Rose more fitted for a pillar than to ramble on an arch.

Aglaia is a very shy bloomer, and one that needs great care when pruning. In fact, it deeply resents the knife or shears, and should be given a position where it may ramble away undisturbed.

Goldfinch is a good Rambler, but its name might lead one to suppose it is all golden in colour, whereas the clusters contain a lot of very pale, nearly white, flowers that detract much from the general effect. I thought we had a real good thing in the

Perpetual - flowering Crimson Rambler, but it is shockingly addicted to mildew, the clusters of bloom being quite marred by the fungus unless checked early.

White Dorothy, when going off bloom, changes to a sort of dirty pink, which is anything but attractive, and we are glad, really, when we can cut away the sprays.

Now, I daresay there are other Roses with bad habits, but I will leave it to others to bring their names forward, and I think a ventilation of this subject before planting-time arrives may save readers a considerable amount of disappointment. This list of Roses with bad habits is an extensive one. The first instalment appeared in *THE GARDEN* July 27; page 379, and no less than forty well-known varieties have been included. It is not claimed that this

list is a complete one, and readers are invited to express their views on Roses that may have been omitted. P.

A BEAUTIFUL GARDEN NEAR WEYBRIDGE.

The gardens at Drynham, Oatlands Chase, near Weybridge, possess many attractive features, and of them an extensive paved Rose garden is one of the most pleasing. Roses are favoured flowers with Mr. Arnold Weiss, the owner of this garden, for here

may be seen an admirable collection of Roses bearing evidence of suitable surroundings and good cultivation. Many old favourites, as *Caroline Testout* and *La France*, are observed, which in their season yield a profusion of flowers. The Rose-beds are bordered by a line of Carnations, and the Rose garden is separated from the pleasure grounds by a well-trained Yew hedge. In the centre of the Rose garden is a fountain and Lily pool, which is quite in keeping with its setting of flagstones. Leading from the Rose garden to the flower garden and pleasure grounds is a flight of steps made of old paving-stones, and no opportunity has been lost to render them attractive and in harmony with the beautiful surroundings. From a glance at the illustration of these informal garden steps it will at once be observed that between the chinks of stone and in every available niche such plants as Thyme, Arabis, Mossy Saxifrage, and Sea Pink or Thrift have been planted, and, more than that, have taken kindly to their surroundings, to which they are so well adapted. This is a phase of gardening both simple and beautiful, and it might often be applied with advantage in other gardens.



STEPS LEADING FROM THE PAVED ROSE GARDEN TO PLEASURE GROUNDS.

trees in the background enhance the beauty of the scene.

Many beautiful flowering shrubs are to be seen in these gardens, and Rhododendrons have been extensively planted in bold groups for early summer effect. We were much impressed by a grand plant of *Abutilon vitifolium*, which in early July was carrying a good display of its showy mauve flowers.

Not the least imposing feature of these gardens is a beautiful alpine and moraine garden, which at the time of our visit was still in course of construction. This rock garden was originally shown at the Royal International Horticultural Exhibition, where it was so much admired by Mr. Arnold Weiss that it was afterwards removed in its entirety to his garden at Oatlands Chase. These gardens are laid out with taste and skill, and are so arranged that an effective display of flowers or foliage may be had at all seasons of the year.

KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Spring Cabbage.—The careful cultivator who appreciates the immense value of this crop in the early months of the year will now have at least two sets of plants, the earliest of which will be ready for their permanent positions, while the later are still in the seed-bed. Immediately a suitable piece of ground falls vacant, it must be prepared by the deepest and most thorough digging and the generous but judicious incorporation of rotten manure—a excess will spell sappy growth that will succumb to the weather; a shortage will mean poor progress and quality. Planting must be done firmly, and a distance of 15 inches, or even rather less, will answer both in and between the lines. The young plants in the seed-bed must be thinned to allow abundant space, and should be removed to nursery beds before they become crowded if the permanent position is not quite ready.

Harvesting Onions.—In a dry season the harvesting of the general crop of Onions does not present any serious difficulties, since they will finish off splendidly on the surface of the bed or on a gravel path; but after a wet period, such as we have experienced this year, rather more care will be necessary, as the plants are sappy. It is wise to be on the safe side in the matter of drying off, even though it involves more time and labour, because, unless the bulbs are thoroughly ripened, it is certain that they will not keep through the winter, no matter how favourable the place of storage may be. The best method of keeping them is in ropes suspended in a position where they will have unlimited supplies of fresh air with no damp; but if this is inconvenient, they may be stored in thin heaps in a dry, airy room. Frost need not worry the grower for a moment if the place is dry.

Winter Greens.—It is more than likely that the whole of the Broccoli, Kales, Savoys and Brussels Sprouts are now in their permanent quarters; but if not, the sooner the task can be finished the better. Indeed, it is already on the late side for most plants. After planting it cannot be said that they make serious demands upon the time of the grower, but they must in no circumstances be neglected, or they will inevitably show signs of it sooner or later. Frequent hoeing should be an inflexible rule, because at the same time as it admits sweet, fresh air to the soil, it prevents weeds from becoming established. It is by no means uncommon to see some of the plants growing too rapidly, and when this occurs the grower

the better, as the possibility of heating is reduced. It is necessary that the place of storage shall be absolutely frost-proof.

Autumn Onions.—There can be no question as to the importance of having a good bed of Onions from autumn-sown seeds, and now is the time to make a start in the majority of gardens. The most popular varieties for the purpose are the Tripolis and Roecas; but the best that I have tried for weight of crop, excellence of quality and long-keeping properties is Sutton's Globe, and those who have not grown it ought to do so. Although the seedlings will be ultimately moved from one position to another, the soil must be thoroughly prepared by deep digging and the intelligent incorporation of manure. It is imperative to success that the drills shall be made firm before the seeds are sown, and all weeds must be suppressed. H. J.



CLETHRA ARBOREA, A FREE-FLOWERING SHRUB FROM MADEIRA.

TREES & SHRUBS.

CLETHRA ARBOREA.

ALTHOUGH introduced in 1784 from Madeira, it was not until July 30 of the present year that the Royal Horticultural Society bestowed an award of merit upon this handsome shrub. Doubtless there are many other valuable plants of time-honoured reputation whose merits have not yet been recognised. This beautiful shrub, unfortunately, is not sufficiently hardy to warrant its cultivation in the open, except in favoured counties such as Devon and Cornwall; consequently it is usually grown as a greenhouse subject in inland gardens. The illustration on this page shows the pure white fringed flowers depending from the under sides of the branches in their usual freedom.

A RARE SHRUB.

(*FALLUGIA PARADOXA*.)

In both gardening and arboriculture an indispensable family is the Natural Order Rosaceæ. A rare monotypic genus belonging to this numerous plant race is the Mexican and New Mexican *Fallugia* or *Sieversia*, a low, hardy under-shrub of singularly graceful appearance. It has many small leaves of somewhat thick velvety texture scattered up its slender white twig, each twig terminating in a solitary virginal white bloom. The flower, characteristic of the Rose family, 1 inch or more in diameter, with its bunch of numerous golden-tipped stamens, is a combination of Flax-like grace, Roek Rose fugacity and texture, and wild Rose attractiveness. It thrives in a warm, sunny position in light, sandy soil, and is increased by the freely-produced seeds. To the lover of rare foreign plants a good specimen in full flower is a pleasing revelation, and is additionally valuable on account of its late flowering season, in early September. W. R.

should go over the quarters when the soil is just on the dry side and tread firmly down close to the stems. This will slightly check the root action and favour hardier progress.

Lifting Potatoes.—The lifting of Potatoes must be proceeded with as the tubers become ripe enough. It is, of course, conducive to excellence of flavour and keeping properties to leave them in the ground as long as possible; but there is always a danger that second growth will set in if the weather turns wet, and in that event the value of the crop will be considerably reduced. The tubers ought to be handled with the utmost care, and no attempt should be made to store them until they are perfectly dry, and even then the smaller the heaps

GARDENING FOR BEGINNERS.

A SIMPLE METHOD OF STORING FRUIT.

I NOTICE in your issue of the 3rd inst. an enquiry from your correspondent "J. C. Le S." asking if fruit could be kept in vacuum receptacles. Is it worth the trouble "J. C. Le S." suggests? If so, let him try it. I opine he would find, when once he opened these vacuum tins, the contents would rapidly succumb.

I have kept my fruit in a most satisfactory manner on lattice trellis stores, and have taken the trouble to make and enclose a plan of one which I trust you will understand and that it may be of use, which will afford me pleasure after the courteous and helpful replies you have always accorded to my enquiries. My stands are made from rough sawn deal (odd pieces, in fact), and are, as you will see, 5 feet by 5 feet by 2 feet 6 inches. I have kept Reinette du Canada on them until the middle of June, and attribute this success to the free air space all round the fruit, which must not, of course, touch each other. I keep mine in a dry attic, and, as you will note, every fruit thereon is visible there. You will note on the plan a rough perspective view of the stand, and it is important that the strips shown at the four corners should be added front and back to attain perfect rigidity. The whole is a knock-down arrangement. I fasten the triangular strips to cross bearers, preferably with string, tightly lacing it; but there are other means by which this can be done should the space between the triangular spines be too much or too little.

T. H. P. DENNIS.
Chelmsford.

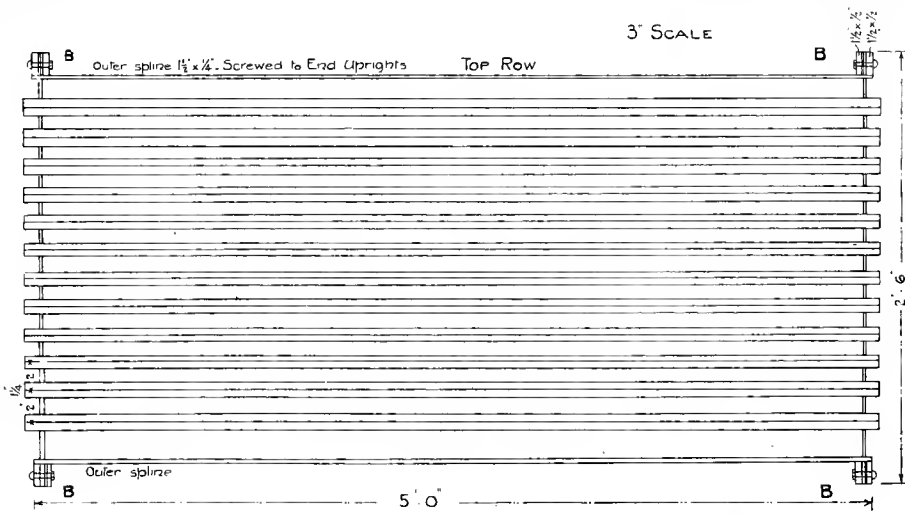
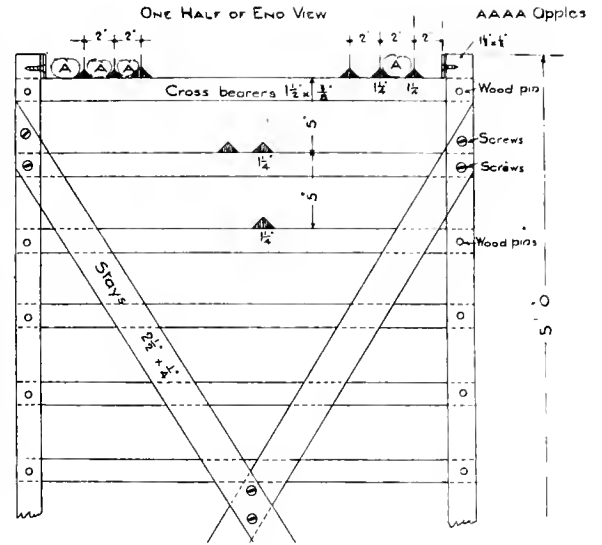
COARSE GRASSES ON LAWNS.

LAST year, owing to the exceptionally dry weather, many fine grasses died on

lawns, and the coarser and deeper-rooted ones spread considerably. Where the latter were left to make all the headway they could, they have now become very conspicuous on the lawn. There are two courses open to owners of lawns—either to wait until next winter before attempting to eradicate the coarse grasses and weeds, or to do so at once, to sow lawn grass seeds in a small quantity of new soil and have nice plants before winter comes. I strongly advise the latter plan. As long as the coarse weeds and grasses are left, so will the killing of the finer grasses go on; this must be so, as the big ones spread. Coarse weeds of all sizes may easily be killed by two or three drops of oil of vitriol in the heart of the plant. The oil of vitriol is a poison, and also burns the skin, so that due precautions should be taken. Uproot the coarse grasses,

put in some fine soil, sow grass seeds and roll well; also water if rain does not

and cropped for the first time this summer. In another ordinary digging or trenching would much



improve it, but the cultivator must lose no opportunity to get the soil into the best possible condition. In no case must the clayey subsoil be brought to the surface and mixed indiscriminately with the top layer for at least three years. At the end of that time, through yearly tillage, the soil to a considerable depth will be vastly improved, and some of the subsoil may then be mixed with the surface portion.

In many gardens there is a clayey soil and also a light one. In such cases the cultivator should, while carrying out trenching work, throw out spadefuls of the clayey subsoil at

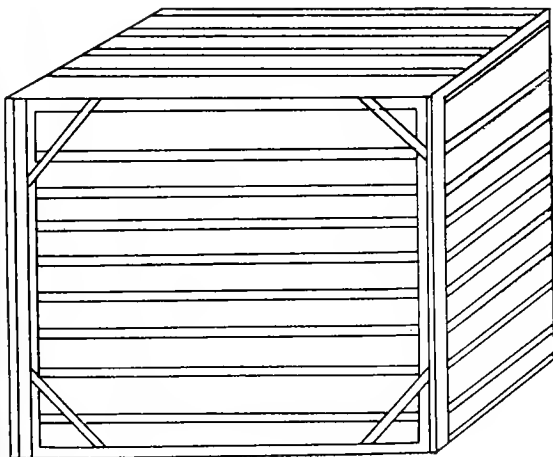
a few weeks' time the lawn will have a greatly-improved appearance, and the work of renovation may go on during the winter months.

HOW TO IMPROVE GROUND FOR VEGETABLES.

EVERY year new plots are dug up and cropped with vegetables. In some instances the newly-broken soil is very good, and does not need much labour to bring it into a good condition for yielding first-rate crops; but in the majority of cases a good deal of labour is needed and much care in the working of the soil and the application of manures. There is no time better than the present for "taking stock," as it were, of the real state of ground which was broken recently

every few yards as the work proceeds, wheel it away to a corner of the garden, tip it down in rough heaps, and leave it there for the frosts and weather generally of winter to act upon it. One turning may be advisable about the end of January. By the end of April the stiff loam will be in a pulverised state and very suitable for mixing with lighter soil. The soil which is added must be kept near the surface, not buried, then it will still be under the influence of the weather. Rotted manure may be mixed with the clayey portion of the soil this autumn, and with the lighter portion next February. The pulverised clayey soil would be splendid for Roses. In the heavy soil Broad Beans, Cabbages, Cauliflowers and winter greens may be grown; and in the lighter soil Dwarf Beans, Peas, Beet, Celery, Potatoes and Carrots may form the principal crops. By judicious treatment from year to year the soil would be so much improved and enriched that very heavy crops could be obtained from it at a low cost as regards the tillage.

AVON.



GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Rock Garden.

The Recent Rains that we have experienced have caused rather a sodden and bedraggled appearance, and considerably detracted from the general show of the few late-flowering subjects. Weeds have, however, grown apace, and careful hand weeding has been necessary. As soon as an improvement in the weather is apparent, the ground should be lightly forked up, and any places badly washed be surfaced with a compost containing plenty of porous material.

Cuttings.—Some of the subjects root very quickly, and any that show signs of having callused and rooted should be removed, potted if necessary, and placed where they may receive more air to prevent them becoming drawn, so that those which require it may be kept close and shaded from bright sun.

Fuchsia procumbens.—This is an interesting little trailing species that has flowered well this season. Unfortunately, here it is not quite hardy; therefore a few cuttings are best inserted at this season and wintered in a cold frame.

The Flower Garden.

Gaura Lindheimeri.—This is an extremely useful subject for the flower garden at this season, producing sheaves of flowers invaluable for cutting, while for continuity of flowering it is hard to beat. Seed sown in the spring will produce flowering plants the same season, but the second year gives a greater abundance, and the plants make dense growth and should not be planted less than 2 feet apart. Transplanted seedlings may be planted out in their permanent quarters now, and will be found quite hardy.

Chrysanthemum maximum.—The varieties of these have been particularly fine with us this season, and have made a wonderful show in the borders, while for cutting they are indispensable. Of the large-flowering varieties *The Speaker* is undoubtedly the best, the size of flower, length and strength of flower-stem exceeding any other variety with which I am acquainted. *Chrysanthemum maximum Daviesii* has small flowers, but is very free and useful.

Cosmeas.—These are among the most useful annuals that we grow at this season, and where cut flowers are in request the three varieties should be grown. They also make charming table decorations. The plants make good growth if planted in the shrubby border and a little attention is given at planting-time to fork up the soil and add a little decayed manure. Each plant should be afforded a neat stake, to which the principal growths should be looped up occasionally, otherwise they may suffer damage from winds.

Pyrethrums.—No delay should now be allowed as to any attention that may be necessary as regards division or replanting of these in the borders. If the plants are not split up into too many pieces, they will be found to thrive much better than if left till the usual season for attention to the borders.

The Hardy Fruit Garden.

Strawberries.—As soon as the runners have become well rooted in the pots into which they were layered, they may be planted out into the open ground where it is intended for them to fruit as soon as ready, and thus get well established before winter. The ground should be in good condition, and the bed allowed to settle before planting out. Knock out carefully from the pot and plant with a trowel in straight rows, leaving 18 inches between the plants and 2 feet between the rows.

Black Currants.—These require but little pruning beyond keeping the bushes within bounds and the removal of some of the oldest fruiting wood to encourage the younger growths and a shapely tree. Before long any attention that may be needed as regards staking should be given the plants, and the quarters of these and other bush fruits must be kept clear of weeds by occasionally going through them with the draw hoe.

The Kitchen Garden.

Onions.—The culture of large Onions is now fairly general, and apart from their value for exhibition purposes, they are valuable for use

in the kitchen. To ensure their keeping qualities a little care is necessary in the proper ripening and harvesting of the bulbs. No further stimulants must now be given, but by taking off the rough outer skin and so exposing the bulb to the sun and air, perfect ripening is afforded. Any signs of splitting can be further prevented by partially lifting the bulbs with a fork. When lifted, place on a soft layer of wood-wool or hay and lay out of doors when dry till thoroughly ripened, when they will be found to keep sound for a very long time.

Parsley.—Make a sowing in a sheltered position in the garden for lifting and planting in skeleton frames for winter use. Thin earlier sowings as necessary, and if the weather is showery, the thinnings may be transplanted out of doors with ease.

Runner Beans.—Keep the plants well supplied with water at the roots. When the growths have reached the top of the stakes, stop the shoots; this will cause the plants to break freely at the base. Keep the Beans picked as soon as fit, and if the foliage becomes too thick it may be partially thinned.

Plants Under Glass.

Fuchsias.—If plants are wanted for decorative purposes in the greenhouse next year, cuttings may now be inserted and struck in a warm house. Place four or five cuttings of half-ripened shoots in a 3-inch pot in a sandy open compost. When rooted, pot singly into small pots and move on as becomes necessary.

Humeas.—Seed may now be sown for producing next year's stock of plants. Sow the seed thinly in pans or direct into 3-inch pots and raise in a warm greenhouse. If the former way is adopted, pot the seedlings off as soon as large enough and avoid injury to the roots. Shade for a few days; after then expose to the light on a cool shelf and give more air.

The Greenhouse.—Keep the occupants in as healthy a condition as possible by sponging and occasional light fumigations. Many of the climbers will benefit if the growths are thinned out and regulated, and always endeavour to let them grow as naturally and gracefully as possible. The plants will greatly benefit, both in health and appearance, by an occasional rearrangement, washing the pots and the surroundings and raking over the base, whether of ashes, gravel or other material.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Propagating Geraniums.—It is usually about this date before cuttings of Geraniums can be taken without the risk of making the beds unsightly. There is yet plenty of time to strike them for them to become established before the winter. My plan, after taking the cuttings, is to dress them ready for insertion in cutting-boxes; then leave them to dry for about two days, after which they are dibbled into the boxes.

General Work.—There is no intermitting labour in picking off decaying leaves and flowers and keeping gross-habited plants within bounds. The beds and borders should be examined for this purpose at least once a week, but twice a week would be better. Weeds have been extra troublesome, and extensive herbaceous borders, on account of the wet, had to be hand weeded three times. These, however, where the plants are closely planted, are now a negligible quantity; but there is constant work in keeping the plants in order, particularly in removing old spikes and decaying flowers and cutting-in overgrown plants.

The Rock Garden.

Hesperis.—The double Scotch or French Rocket is a capital rockery plant where effect is an object. It has, however, a disagreeable habit of dying if left too long, and therefore annual propagation has to be resorted to. The plants should now be lifted and pulled to pieces singly, and these be planted in cutting-boxes and placed in a cold frame till spring, when each will be strong enough to produce a spike of flowers the ensuing summer.

Saxifrages.—The low-growing, spring-flowering species, such as *sancta*, *Rhei* and the muscoides,

flower more profusely when pulled to pieces and replanted in fresh ground, and this operation may be effected now or soon. The little clumps should be only a few inches apart to ensure the whole space to be covered. An easier way is to pull out pieces from the groups without lifting, dressing with finely-sifted rich soil. Offsets of the *pyramidalis* section may be taken and replanted forthwith, the single pieces coming to flowering size in considerably less time than when left on the parent plant.

Erinus alpinus.—This pretty little flower is sometimes unreliable, and needs to be raised from seeds at intervals. Seedlings sometimes appear among stones, and these, if necessary, should be lifted and rearranged. Odd corners of rough steps suit them well.

The Vegetable Garden.

Onions.—Winter Onions will be certain to need hand weeding and the ground stirred with some sharp implement. If any of the spring-raised crop is running to seed, pinch out the stem at once, otherwise the bulb will cease to swell. In some seasons the foliage is much infected with Onion rust, and perhaps the best way to treat this is to cut off the infected leaves below the diseased parts. If allowed to progress, it undoubtedly injuriously affects the keeping of the bulbs throughout the winter.

Cabbages.—It is too soon for the main lot of these to be ready to transplant, but any specially large seedlings, if transplanted in the course of the next week, may come in some weeks in advance of the general crop. Thin out small ones if too close in the seed-bed, and remove any weeds such as Groundsel and Chickweed.

Lettuces and Endive.—Continue to plant out seedlings of these as they become ready. One can never be sure which will come in most useful for winter and early spring cutting, early sowings in mild weather turning in too soon, while later ones come just right, though perhaps of no great value in late seasons.

Radishes.—A large sowing made in the course of the next few days will be of much value as a late crop. Sow quite thinly in finely-pulverised soil and thin out if the seedlings come too close, else the greater part will run to leaves. These, if all goes well, will produce roots to use over many weeks.

Hardy Fruits.

Gathering Apples.—Lord Suffield, Lord Grosvenor, Victoria and Golden Spire may be mentioned as varieties which, if heavily cropped, may have the more forward fruits gathered, when the later ones will be considerably enlarged in the course of two or three weeks. Irish Peach may be gathered in the same way, only the trees will need to be inspected every two or three days, and a watch should be kept on other early-ripening varieties, especially those favoured with a wall.

Pears.—Clapp's Favourite usually commences to ripen at this time, and, like *Jargonelle*, matures very rapidly, but is not so liable to rot in the centre as the latter. Dr. Jules Guyot is another fair-flavoured variety which must be watched. The fruit of this kind keeps rather better than the others named.

The Plant-Houses.

Pelargoniums.—Spring-struck plants of the decorative section should now be advanced enough to be repotted into 6-inch pots. Rough rotted turf, dried cow-manure and a little sand suit them well, making the material rather firm, especially that in the under part. Give abundant ventilation, and remember that aphid is an intolerable nuisance.

Calceolarias.—These ought to be advanced enough for 4-inch pots. A rather heavier compost than that advised above is suitable. Keep the plants as cool as possible, and damp or moisten under and about them. Dryness at the root is to be deprecated above everything. If aphid appears on the under side of the leaves, dust with Tobacco powder.

Cinerarias.—Six-inch and 7-inch pots should be used for the larger plants of these, using leaf-mould and old Mushroom-bed manure to the loam and potting loosely rather than hard. Give the plants plenty of space in the frames, the leaves after this potting coming large and demanding extra space; and it must not be forgotten that they will do much better in cold frames than anywhere up to November.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

DAFFODIL NOTES.

SOME MODERATE-PRICED DAFFODILS FOR SHOWING.

BEFORE I begin my list I would once more urge the great importance of early planting. It makes all the difference in the world. I would like anyone who is sceptical upon this point to buy a dozen of Emperor and plant half of them as soon as he gets them and the rest two months later. Then, when April comes, I would ask him to note and measure the results. Early planting means vigour and size. It also means better health for the bulb and greater increase. Dealers are fully aware of this, and those who list the more expensive varieties generally put a note in their catalogues to the effect that about the end of August or early in September their sales for these will cease, as they will then plant what is unsold. In a garden border it does not matter so very much if this or that bloom is not quite as large as it might be. Nor when the prices are low is it so important to get all the increase we can from our purchase, nor is the health question of such primary consideration. The first point is hardly noticed, and the results of the second and third are soon put right by buying new ones another season. Not so with the expensive "show" ones. Size at an exhibition means much. Increase and good health denote an adequate return for the money laid out.

Having urged the importance of early planting, I am now going to take the Royal Horticultural Society's List, section by section, and call the attention of would-be buyers to some of the more moderate-priced bulbs that are included in them. The word "moderate" needs defining. For my present purpose it may be said to be anything between two shillings and two pounds.

Division I.a, Yellow Trumpets.—This is an easy section to provide for. Such kinds as Hamlet, Cornelia, King Alfred, Lord Roberts, Monarch, Mervyn, Outpost and Mrs. H. J. Veitch are all flowers of good quality, although as grown in my garden I cannot say they are every one of them very good doers. Monarch does fairly well, but Lord Roberts but poorly. In some gardens the reverse takes place. Mervyn has its years, one good and the next bad. I feel I must give such warnings to put people on their guard and to prevent them expecting every kind to do as well as the good old Emperor. Lesser-known ones are the Rev. R. D. Williamson, a deep yellow, valuable for its lateness; Golden King, a new introduction of last year, of which I think highly—it promises to be a good doer; and Cleopatra, later still than the Rev. R. D. Williamson, a splendid thing and of large size, tall and very refined. Messrs. Barr and Sons have an excellent picture of it in their 1911 list. Two very beautiful deep rich yellows, almost rivalling the still unapproached Maximus, are Goldsecker and Leiden Jar. I have not grown either of them, and only know them for their appearances at shows; but they are always described as vigorous and strong in trade lists.

Division I.b, White Trumpets.—This is a coming section. There are a fair number of most lovely things coming along—Ailsa and Countess of Stamford, for example, but they are very dear now. Even Florence Pearson, which is one of the most robust, is not a quick increaser, while White Knight, probably the most refined Daffodil in

creation, is a very slow one. This means prices are slow in coming down; but everything comes to him who waits, and we can now buy Mrs. Robert Sydenham, which is a good, well-made flower, with a somewhat long and narrow trumpet, for 30s. from Miss Currey, and Mrs. G. H. Barr for the same figure from Messrs. Cartwright and Goodwin. One of the best of all low-priced ones is Princess (12s. 6d.), which only seems to be listed by Mr. Wilson. It is not large, but is well formed. As I have just bought some myself, I feel I can recommend it. Another show bloom is Treasure Trove, price about half-a-sovereign. I think it will be a fair grower. In pots it is exquisite. Loveliness and Lady of the Snows are two good varieties. I see in looking over old notes the former has frequently caught the writer's eye.

Division I.c, Bicolor Trumpets.—When we leave the well-known Duke of Bedford, Weardale Perfection, Glory of Nordwijk and Mme. de Graaff we have very few of moderate price. Cygnet is one of the best. It is of the pale type, and has a long trumpet, strikingly rolled back at the mouth. Judge Bird is a glorified Empress. Coronet is a beautiful flower, by no means large, but very taking on account of the deep tone and the bold contour of its trumpet. Queen Emma, one of Messrs. van Waveren's productions, I have not been able to find in any British list. I cannot think why, as it is an exceptionally good bloom for exhibition. It is on the early side. So, too, is William Baylor Hartland, a huge flower, well formed. The perianth is ivory white and harmonises well with the trumpet. I had some remarkable blooms this spring that, had they appeared in the Narcissus committee room of the Royal Horticultural Society, would, I think, have secured it an award of merit.

Division II.a, Large Chalice-cupped Daffodils with a Yellow Perianth.—Blackwell, Autocrat, Gloria Mundi, Homespun and Lemon Queen are well-known types of this section, which, to tell the truth, I always find a little difficult to fill when I am getting my blooms together for a show. One naturally thinks there must be no end of suitable varieties, but there are not. Some day, when Cœsus, Queen of Hearts, Helios and such flowers as Tammerlane are within the reach of ordinary pockets, there will be plenty to pick from, for there are many now in existence, and these will in time find their way into the market. Solfatare, and more particularly Noble, are excellent in every way. Both are on the late side, and both have good form and substance. I consider the latter a very fine thing indeed, and one that will be a Daffodil as long as it lives. Marguerite Durand is now placed in this section. When it opens it looks like a Leedsii, which indeed it is, but as it grows older it takes on a peculiar shade of pale canary. It should be allowed to grow on the plant, and must not be cut in the opening bud stage. Giraffe is a plant of great vigour, and has solid-looking, overlapping perianth segments and a large expanded crown much frilled at the edge. Of those of lesser value I would pick Cœur de Lion, a fine flower in a young state, with an open reddish cup; Northern Light; and Red Cup, a notable flower, owing to the orange glow in the yellow perianth.

Division II.b, Large Chalice-cupped Daffodils with a White Perianth.—This is one of the easiest sections to fill if one had to show in a six or a twelve class. There are any number of good flowers. Taking the more expensive first, we have Bernardino, Fleetwing, Charles, Lady Moore, Great

Warley and Pedestal. Fleetwing, Pedestal and Great Warley are bicolors. Charles and Lady Moore are mentioned because of their very striking cup, which has a fairly well-defined broad band of red round the edge. I call them both very excellent substitutes for Challenger. They are both most effective in any collection, and, what is also good, they are very distinct from other varieties, although of the same look themselves. Whitewell has now earned itself a position, and it bids fair to be one of the most popular show flowers. Amber is of the Nelsonii type, with a fine bit of pale orange in its cup. Lady Margaret Boscawen and Brigadier are fine bicolors, the latter being the more pointed. Steadfast is even better, but it is very late. Orangeman, when it does well, is most effective, its hold, orange cup always standing out conspicuously.

JOSEPH JACOB.

(To be continued.)

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Montbretia Star of the East.—Judged by the progress of the modern Montbretia during the past eighteen or twenty years, this remarkable variety has advanced by a single bound at least a decade from all its fellows, outdistancing the best of them in size—the individual flowers are $4\frac{1}{2}$ inches in diameter—in purity of colour-tone and refinement, and not less so in the great flat flowers, whose presence is as a blazing fire. In their opening hours the flowers assume an almost blood orange tone; later when more expanded, a paler, rectified orange colour prevails, which contrasts well with an almost primrose yellow base. The reverse of the flowers, like the oncoming buds, is of an intense red orange over all, so that from any point of view the variety is of the picture-making order. Not least among the many good attributes of this unique variety is its fine branching habit, which promises a long succession of flowers. We congratulate the raiser upon so signal a triumph, regretting that such an epoch-making plant has not brought more tangible recognition to the worker. Exhibited by Mr. G. Davison, Westwick, Norwich.

Lælio-Cattleya Glaucus.—A unique and very highly-coloured hybrid raised by crossing Lælia purpurata and Lælio-Cattleya rubens. Of perfect form and compact habit, the dominant colour of the flowers is a vivid ruby red, with bright yellow disc. The hybrid does not partake of the character of Lælia purpurata, and some doubt was expressed as to its parentage. Be this as it may, it is a striking novelty, and worthy of its high award. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

Lælio-Cattleya Godmanii.—This is quite a distinct hybrid, remarkable for its large crimson lip. The petals and sepals are of an intense rosy hue. Parentage: Cattleya Iris × L.-C. callistoglossa. Shown by F. Du Cane Godman, Esq.

AWARDS OF MERIT.

Kniphofia Unique.—In colour best described as a reddish scarlet K. Nelsonii, from which, indeed, it is a seedling. The plant is $3\frac{1}{2}$ feet in height, with all the freedom of flowering of the original species and with considerably improved vigour. We regard it as a welcome border plant of middle height, and one specially suited to massing because of its distinctive colour and free-flowering. From Messrs. Wallace and Co., Colchester.

Cosmos White Queen.—A graceful and elegant variety, quite pure in tone, that should be much

in demand. It is quite an acquisition. Exhibited by Messrs. Dobbie and Co., Mark's Tey and Edinburgh.

Rhodostachys andina.—An interesting Bromeliad from the Chilian Andes, whose rose pink flowers, crowded on a hemispherical receptacle, are rendered the more conspicuous by the orange anthers. The arching or recurving leaves are strongly spined, of a greyish glaucous green, and arranged in a dense regular rosette. This interesting plant is not a novelty, but one whose rare appearance in public calls for more than ordinary notice. Exhibited by Mr. J. T. Bennett-Poë, Chesbunt (gardener, Mr. Downes).

Lælio-Cattleya luminosa Mandarin (*L. tenebrosa* Walton Grange variety × *C. dowiana aurea*), from Lieut.-Colonel Sir George Holford, K.C.V.O.

Brasso - Cattleya Ilene (*C. dowiana* × *B.-C.* Mme. Chas. Maron), from Messrs. J. Veitch and Sons, Limited.

Odontoglossum Empress Eugenie (parentage unrecorded), from E. H. Davidson, Esq.

Odontoglossum nigrescens (*O. Edwardii* × *O. cirrhosum*), from Messrs. J. and A. McBean.

The foregoing awards were made by the Royal Horticultural Society on August 13.

FLOWER TRIALS AT WISLEY.

The following plants have been adjudged awards of merit at Wisley after being inspected by the visiting committee appointed for that purpose. The varieties are not necessarily novelties—some, indeed, are well known and largely cultivated—one object of the trial, apart from its informative character, being to confirm previously-expressed opinions and, in the case of the Violas, to set a hall-mark of merit on those varieties which, by their persistent flowering appear best suited to garden-decoration generally.

VIOLAS.

Edina (Dobbie).—Of rich royal purple colour, habit compact and dwarf, free-flowering, and generally regarded as an advance on the well-known Archie Grant.

Pencaitland.—A fine pure white with yellowed lip; good perennial habit.

Walter Welsh (Dobbie).—Colour rich golden, the flowers slightly rayed. Of rather tall growth, but almost indispensable for its colour.

Maggie Mott (Dobbie).—This well-known pale blue needs no description. It is indispensable to all lovers of the Viola.

Lavender Queen (Mr. Cuthbertson, Rothesay).—A good dark lavender blue shade, with rather conspicuous dark rays to the flower. Habit and freedom of flowering excellent.

Snowflake (Mr. Cuthbertson, Rothesay).—A splendid white-flowered variety with yellow eye, perhaps the best white self in the collection.

Jubilee (Mr. Cuthbertson, Rothesay).—Fine purplish maroon, free, and a good carpeter of the soil.

Mrs. Chichester (Mr. Cuthbertson, Rothesay).—White with mauve shading and pencilling. A most pleasing and effective variety.

W. H. Woodgate (Forbes, Hawick).—This is of almost plumbago blue colour, and as distinct as it is desirable.

John Quarton (Forbes, Hawick).—A good all-round blue of excellent habit and freedom of flowering.

Mrs. Davidson (Forbes, Hawick).—Blue with lilac red shading distinct

King Cup (A. Dickson).—Rich golden colour, free-flowering, and with a good carpeting habit of growth.

Bessie (A. Dickson).—White, shaded lilac, and with yellow eye.

Palmer's White (Mr. Palmer, Derby).—A sturdy-habited variety and a good yellow-eyed flower withal. Excellent in every way.

SWEET PEAS.

Mrs. Routzahn (Dobbie).—This is probably one of the indispensables of the cream pink section, and is an exquisite colour combine.

Tennant Spencer (Dobbie).—Rosy purple to purplish mauve. A fine handsome-looking flower, quite a top-sawyer in its way, and good for garden or exhibition.

Isobel Malcolm (Dobbie).—An ivory or cream coloured flower of exquisite quality wedded to a plant of wondrous vigour and freedom, as well as profuseness of flowering. Quite in the front rank.

Hercules (Stark).—This variety stood out well in the collection, as befits the giant it really is. It is of rose pink colour; in brief, a glorified Countess of rare substance.

Premier (Stark).—Intense crimson, with no traces of scorching. A remarkable and striking bit of colour, and probably unique in this respect.

HOLLYHOCK.

Newport Pink (for strain).—The long line of fifty-two seedling plants made a fine display, and were absolutely true to colour—a good rose pink. From Mr. Dreer, Philadelphia.

The following awards were made as the result of trials held at Wisley:

MELONS.

First-class certificates were granted to the well-known varieties Hero of Lockinge and Frogmore Scarlet, both sent by Messrs. James Veitch and Sons. An award of merit was made to Royal Favourite, sent by Messrs. Sutton and Sons.

MARROWS.

The following were each granted an award of merit; Bush Green, sent by Messrs. Barr and Sons; Moore's Cream, sent by Messrs. R. Veitch, Exeter; and White Bush, sent by Messrs. Nutting, Southwark Street, S.E.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PEONIES GONE WRONG (*Northwood*).—The most probable cause of the blind buds is the great drought of the summer of 1911, which precluded the development of the crown-buds on which the flowering depends. We can only suggest a very generous treatment of the plants at the present time as a means of modifying an even worse state of things another year, watering and affording liquid manure to the plants with the greatest freedom. There have been so many failures with these plants this year that

we published a special article on this subject in our issue for July 13.

SWEET PEAS (*H. W. S.*).—Bud-dropping is as prevalent as ever this season in well-grown plants on rich soil. It is more than probable that when the plants settle down to free flowering the trouble will almost, and probably entirely, cease.

PINK (*R. de la Poer*).—A very pretty, and apparently distinct, variation of the common Mule Pink, quite worth perpetuating if freely flowered. We are assuming it to be a Mule Pink from the flowers alone, though, had you sent some of the growth, we could have given a more definite answer.

CARNATIONS UNSATISFACTORY (*H. W. S.*).—We should ascribe the trouble with your Carnations to excellent grown and severe disbudding. Vigorous plants must have an outlet for their energies, and disbudding to a limited number of stems with only one bud on each does not provide it; the flower comes either abnormal, as in your case, or coarse. Allow more flowers, and you will probably have them perfect.

LILY DISEASED (*M. C. T.*).—Your plants are badly attacked by the well-known Lily disease, which in some parts has been attended by dire results. All you can do at the present time is to collect and burn every atom of the diseased leafage or stem-growth, and at the end of July lift the affected bulbs, give them a sulphur bath, dry them, and subsequently transplant in a fresh position. In the ensuing year, should the disease reappear, syringe the plants at once with sulphide of potassium, 1oz. to two gallons of rain-water. As a preventive measure you might employ this once every ten days from March to June, wetting both upper and under surfaces of the leaves.

SWEET PEAS (*E. M. B.*).—The Sweet Peas are attacked by eelworm. It is doubtful whether anything that can be done will cause them to recover; but you might try earthing them and use a stimulating manure, such as nitrate of soda. It is very doubtful whether the making of a hole in a clay soil and filling with a lighter soil is a wise measure, for the hole is apt to act as a catch-pit for water and the soil to become waterlogged. Great care should be exercised to see that the drainage is always thoroughly efficient. Eelworms are frequently introduced with stable manure if it has not been well matured before use, and especially if it is from animals fed with Clover hay. The soil before it is used for growing Peas again should be turned right over, so as to bury the eelworm-infested part as deeply as possible, and dress well with potash.

TREES AND SHRUBS.

AMPELOPSIS (*M. H. W.*).—Without seeing the plant and the conditions under which it is growing, no definite statement can be made respecting the cause of the shoots dying off. Old plants are sometimes attacked by canker. Fortunately, Ampelopsis Veitchii is a particularly quick-growing climber. Your best plan will be to root out the old one in autumn or spring, work in some fresh loamy soil, and put in a strong young plant.

LIME TREES (*L. E. T.*).—The common Lime is one of the best trees for clipping and training as you suggest. It is also a quick-growing tree, and would soon form a screen. *Tilia petiolaris* and *T. dasystyla* are, perhaps, improvements on the common Lime, *T. vulgaris*, in some respects, for they keep cleaner, and the leaves do not turn yellow so early in autumn. Should you require an evergreen, you might plant Austrian Pine. The Horse Chestnut is also a good deciduous tree for the purpose, but it is somewhat heavier than the Lime.

ROSE GARDEN.

BLACK SPOT ON ROSES (*M. A.*).—Unfortunately, you can do little to check this pest now, as it has such a hold upon your plants. It may be kept in abeyance if the plants are frequently sprayed with sulphide of potassium from the commencement of their growth. It is not likely to spread much more, as the visitation is nearly always simultaneous. You should, however, persevere in having infected leaves gathered up and burnt, and in winter have about an inch of the surface soil removed and burnt.

ROSE LEAF-CURL (*Mrs. Mallock*).—We have noticed that this troublesome disease seems especially to attack Roses growing in light soils. It is generally supposed to be caused by an insect—one of the sawflies, but we believe it is a fungus. At present it seems to be a mystery as to its origin, but we believe it is brought into the soil upon roots of plants that have come from infected districts. We would advise you to transplant your Roses next autumn, giving them some good loam, and prior to replanting well wash the roots. Pick off all the worst leaves and burn them.

ROSES, MANURE AND INSECTS (*Miss E.*).—Sulphate of iron is not a desirable manure to use for Roses; occasionally its use improves the colour of the flowers, but there are much better and safer manures to use. One of the best manures for Roses is Tonk's manure. This contains a very small proportion of sulphate of iron. A quick-acting and valuable manure for present use is Clay's Fertilizer. Dissolve 1oz. in a gallon of water, applying twice a week. From what you say, the pale yellow fly is the winged form of the common aphid, or green fly. Spray with a nicotine solution or diluted quassia chips extract, made by pouring boiling water on the chips. Soft soap is a good safe remedy. The piece of plant enclosed may be Spinach; but, please send when in flower, and also enclose a leaf or two from the base, as these are different from those on the stem and are useful for identification.

THE GARDEN.

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AUGUST 31, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W C

NOTES OF THE WEEK.

Honour for a Nurseryman.—Mr. Henry Merryweather, head of the well-known firm of Messrs. H. Merryweather and Sons of Southwell, Notts, has been appointed a Justice of the Peace for the county of Nottinghamshire.

Our Rose Articles and Coloured Plates.—To avoid confusion, all articles written by our contributor who has hitherto signed them "P." will in future appear over the signature of "Dane-croft." In response to the request of a number of our readers, our coloured plates will in future be published as separate sheets. They will not appear on the cover except on special occasions.

Linaria alpina rosea.—This is one of the prettiest of alpine flowers now in bloom, and which has also been flowering for some weeks past. The flowers are coloured a rosy pink, which is in contrast with a rather rich orange-coloured palate. The glaucous grey of the frail, almost succulent leaves and stems is also a feature of the plant, which is well suited to colonising in stony soil on the rockery. Occasionally the plant is seen to do well on old limestone walls, and anywhere it is both pretty and distinct.

A Hardy Pelargonium (*P. endlicherianum*).—If only because of the distinct beauty of its rosy and white flowers and the fact that in favoured places it is one of the most profuse of summer and early autumn flowering plants, this, the only species of the genus possessing any claim to hardiness, is worthy of every care. In Southern or South-Western England the plant may be safe in the open; elsewhere it may be well to lift it each year. The species is one of comparative rarity, though growing moderately well in sandy soils.

A Beautiful Evergreen Shrub.—In those favoured gardens where *Desfontainea spinosa* will thrive it should be encouraged to the full, because of the rare combination of scarlet and gold with which its tubular flowers are robed. These, brilliant and exceptional as they are, appeal the more strongly by reason of the striking contrast of the dark olive green leaves, and which constitute so good a foil to the flowers. In short, this too-little-known evergreen shrub is a plant of wondrous beauty and charm.

Clematis chryscoma.—This very rare and exceedingly beautiful *Clematis* was many years ago known in this country, but was, unfortunately, lost to commerce. Recently it was reintroduced from China, where it was found in the high altitudes of the Yunnan Alps. It belongs to the sub-shrubby section, and is perfectly hardy. The four-petalled flowers are produced on 3-inch stalks from the axils of the leaves, and are 2 inches to 3 inches across, white, with a slight suffusion of rosy lilac. The foliage is slightly woolly, like the leaves of the *lanuginosa* type, and, growing only

about eighteen inches high, it promises to become a very acceptable pot plant. It is not yet sufficiently propagated to be put into commerce, but next year may possibly see it listed.

Saxifraga cæsia.—A nice tuft of this well in flower has just arrived from Switzerland, which says much for the lateness of the season there this year. Quite heavy falls of snow, we are informed, were experienced in early August, with much cold and wet. In this country the pretty white-flowered *Saxifraga* referred to usually flowers in June. It is one of the miniatures among silvery kinds.

A Double-flowered Tunica.—If not the plant for effective display at a distance, the pretty carpeter and trailer, *Tunica Saxifraga flore pleno*, is desirable because of the pinkness of its "rosy" flowers. Thin and wiry of growth—not enough of it to please some—it is welcome to those who like to have all classes of plants—some for display and others to interest—so that their rock gardens may contain food for the mind as well as the eye. This pretty plant asks for nothing more than gritty loam and a fairly deep root-run.

Variation in Black Currants.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Messrs. J. R. Pearson and Sons wrote that their Black Currant bushes were similarly affected to those mentioned on page 385 of our issue dated August 3, but that the trouble was not due to pruning. A letter on the same subject was read from Mr. E. Ballard, who suggested that forcing by too much manure or too hard pruning was the cause of the "throw back," or sporting, in Black Currants, and that the trouble is common among the Worcestershire growers.

Tamarix pentandra.—This is one of the daintiest of July and August flowering shrubs, for in habit it is light and graceful, while its tiny flowers, which are a delicate shade of rose, are very pretty. Although the plant had been known previously, it was brought prominently to notice about eleven years ago, when it was figured in the *Revue Horticole* under the name of *T. hispida æstivalis*. Subsequently it was called *T. Pallasi rosea*, but it is now known under the name which heads this note. Growing 3 feet to 4 feet high, it produces plumose branches clothed with bright green leaves, and among these the flowers are freely interspersed, the upper half of each shoot being covered with blossoms. The plant is usually cut hard back in spring, thus enabling shoots 3 feet long to be formed each year, for it is from strong young shoots that the best results are obtained. The branches removed during January are excellent for cuttings. These, cut 9 inches long and placed in the open ground in a similar manner to Currant cuttings, root during the following summer, and in two years' time form excellent flowering plants. Good loamy soil suits this *Tamarisk*, which is equally useful for seaside and inland gardens.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Calceolaria hyssopifolia.—Under this name a kindly-disposed correspondent sent me in spring a *Calceolaria* which has given much pleasure during the summer, and it is still in flower in the open. I fear, however, that it will not prove hardy, as I find that it is a native of Chili and Ecuador. It is quite pretty, with its narrow, rather glossy leaves and yellow and canary flowers. It is of shrubby habit, and should be a good subject for growing under glass or for planting out in summer. Here it is about a foot high, but I am told that it will grow to 2 feet. It is not a new species, but is not to be seen every day.—S. A., *Dumfries*.

Roses Lady Gay and Dorothy Perkins.—With regard to the correspondence in your columns as to the relative merits of these two Roses, may it not be that the difference of opinion arises from the way the plants have been propagated? Some people strike these from cuttings. *Lady Gay* does not succeed well in this way, and the plants are not long-lived. Others work them upon unsuitable stocks. Grown properly, I do not think there is much to choose between the two, but I prefer *Minnehaha* to either. The blooms are a brighter pink and are carried in sprays instead of close clusters, giving a more elegant appearance. Also it is a splendid doer, either as a climber or standard.—A. H. PEARSON, *Lowdham, Notts*.

Sweet-scented Musk.—The old-fashioned strong-scented Musk with small yellow flowers used to be grown by nearly every cottager in the country, and I used to see odd plants regularly in windows. Possibly some reader of *THE GARDEN*, seeing and reading "A Regular Subscriber's" letter on page 411, issue August 17, will communicate with the Editor, and in this way disclose the whereabouts of some pots of real old-fashioned Musk. Some years ago I noticed a clump of it in a herbaceous border in a large garden I had charge of. It was under the partial shelter of a *Magnolia* tree, but it flowered freely every year. I fear this clump was accidentally destroyed by some of the workmen while making alterations in this particular border. Plants in pots will live and flourish for ten or fifteen years without being disturbed. Readers will be interested to learn, through the Editor, particulars of the plant in question. There is no difficulty in procuring plants of the non-scented Musk with small yellow flowers.—SHAMROCK.

—With reference to "A Regular Subscriber's" query as to sweet-scented Musk and the Editor's remarks thereon, I would also like to say that I have for some years past bought plants from numerous advertisers who pretended to have the scented variety, but in every case they were not scented, or very slightly so. I should, therefore, be glad if any advertiser or reader of *THE GARDEN* could inform me where I could get a plant of the genuinely scented variety. No doubt it is to be found somewhere, probably in a cottager's home or in that of a country nurseryman.—A. SAUNDER, 6, *Holmewood Gardens, Brixton Hill, S.W.*

Paulownia imperialis after Flowering.—The excessive heat of last summer, combined with favourable conditions this spring, were undoubtedly the chief reasons why *Paulownia imperialis*, with its huge spikes of lavender blue flowers, was such an

attractive feature during June of this year in the few gardens in which this handsome Japanese tree is grown. In most cases it would now be laden with an unusual crop of fruits, which are ovoid, acuminate, and about an inch long. These should be removed for the benefit of the tree, as they would take a lot of nutriment from it, and the seeds seldom come to maturity in this country. This operation should be done with great care, for quite close to the bunches of fruit the flower-buds are already formed for next season's display, providing they can survive the winter and late spring frost.—F. G. PRESTON.

Matthiola bicornis.—For a number of years it was my duty to supply many plants possessing fragrant foliage or fragrant flowers, and I was well served by this small but deliciously-scented flower. Like your correspondent the Rev. Joseph Jacob, who has drawn special attention to the plant on page 410, issue August 17, I used to scatter the seeds thinly on the surface of the soil and rake them in. At first I made the mistake of sowing the seeds too thickly; result—decay of overcrowded plants in bad weather. The present summer has been very favourable to this plant. On account of the flowers closing during bright days, I used to scatter a few seeds of *Mignonette* among those of the Night-scented Stock, as it is commonly called; and, furthermore, I have also had Zonal *Pelargonium King of Denmark* planted 2 feet apart in the same bed, so that there was never any lack of blossom in it.—B.

Sending Seeds and Plants Abroad.—Though an ardent American, I have for many years bought, and encouraged others to buy, seeds, bulbs and plants from British dealers and growers. This I believe to be a vital stimulant for our own growers and seedsmen. May I through these columns, however, give a word of advice concerning the best methods of sending from England to this country? The *Parcels Post* is the medium, the conveyor. Though an order must be divided into several parcels if the plants sent are of such character as *Delphiniums* or *Pyrethrums*, no method of transportation is safe except the *Parcels Post*. Under no circumstances should one permit the express companies to forward such an order. The delays in New York would almost invariably mean death to the piteous occupants of the box or parcel. To prove my faith by my works, I enclose a small picture of *Myosotis* from Sutton's seed in my garden last May. You are at liberty to publish it if you wish.—(Mrs.) FRANCIS KING, *Orchard House, Alma, Michigan*. [Unfortunately, the photograph, which depicted excellent plants, was not sharp enough for reproduction.—ED.]

Preparing Lobelia for Winter.—The hints given by "B." (see issue August 10, page 405) for preparing and keeping *Lobelia* through the winter are well enough so far as they go, but they do not go quite far enough; hence I make no apology for the following by way of supplementing them. For some years I had to provide any number from 25,000 or 30,000 upwards, and did it as follows. Quite early in August—sometimes in July—when the first flush of blossoms was past, the plants were cut down to within an inch of the soil, and the latter being lightly pricked up, the surrounding surface, as also the newly-cut-down plants, were given a mulching of finely-sifted, sandy and rather rich soil, which was subsequently gently watered to settle it down. With the lapse of two or three weeks both new growth and new root-fibres were abundant, and at any convenient time the plants

were lifted, divided up as freely as possible, and planted an inch apart in shallow boxes of rich sandy loam. Consigned to a frame—a manure frame with declining or exhausted heat for preference—and thoroughly watered, the young plants started into growth immediately, and, cut over with scissors once or twice subsequently, usually covered the boxes by October in much the same way as those bedded out in summer. I always found *Lobelia* so treated to delight in ample supplies of water, and to such an extent that the branches sent out rootlets with great freedom. In this way a large percentage of the early cuttings were of the Irish standard, *i.e.*, ready-rooted ones. Six or a dozen plants treated as above would be ample for most amateurs, while for the large number I had to provide, 100 plants always gave sufficient, and were planted in reserve for the purpose. The material difference of "B.'s" plan as compared to my own is that "B." relies upon the partly-resuscitated vigour of the old plants, while I go in for the creation of an entirely new plant, characterised by the freshness, vigour and growth freedom of youth.—E. H. JENKINS.

Judges Judged.—Having been asked to give my opinion upon this subject, I now do so, but quite irrespective of the case of the Sweet Peas that gave rise to the question. Every judge should do his best to correctly interpret the strict reading of the schedule as it pertains to the rules and regulations laid down therein. Wherever I have had any doubts upon this point, my plan has been to consult some responsible members of the committee. If a schedule be not sent me when I am invited to act as a judge, I always request that one be sent upon my acceptance of the invitation. Then, in my spare moments—possibly upon my journey, if not before—I read the schedule up and look out for all moot points in particular. These I carefully note and consult my colleague upon. Sometimes a rule may be read in diverse ways, either in favour of the exhibitor or in favour of the society. Such cases have to be well thought out. No judge should ever act without studying the schedule previously. When any society invites a judge to act, it is always better to there and then send a schedule so that it may be considered. After the awards have been made, more particularly in a keen competition, every judge should be able to give his reason definitely for the decisions arrived at if he be called upon to do so by the society. I do not, however, believe in doing this to every exhibitor without a cogent reason. No society should impose upon the judges any kind of work not immediately associated with the actual judging. By this I mean such as sticking on the awards or in any unnecessary booking. All this takes time, which is too valuable to be expended in such work. Judging should always commence to time. The exhibitors themselves are often to blame for any failure to comply with this regulation. Judges are sometimes called upon to do unpleasant things, such as where absolute deception has been practised with the intent to defraud. On the other hand, I have had to deal with instances of palpable oversight, such as staging nineteen plants instead of twenty, or in putting one more fruit of a Pear, a Peach or a Fig upon a dish. In these instances I have asked the committee to either set the matter right themselves, or call upon the exhibitor to do so himself. In conclusion, let me say that all societies should do their utmost to make the rules and regulations as plain and explicit as possible. Then the judges should do their best to comply with the same.—JAMES HUDSON, V.M.H.

Japanese Irises.—I enclose a photograph of Japanese Irises growing here on the edge of my piece of water. They have been planted now a good many years, and invariably do well. I have to protect them with wire from rats, which are very fond of the tuberous roots. You may like to reproduce the photograph in THE GARDEN.—**GEORGE DIXON, Astle Hall, Chelford, Cheshire.**

Coreopsis verticillata.—This bright little Coreopsis is at present very pleasing in the garden of Mr. James Davidson, Summerville, Dumfries. Its light and graceful foliage is always pleasing, and, when well supplied with the pretty yellow flowers, a good plant is among the most useful of the border plants of July and August. In this garden it is less than two feet high. Not so well known or so large-flowered as *C. lanceolata*, it is a more perennial subject in most gardens.—**S. ARNOTT.**

Begonia carminata.—Of late years a considerable amount of attention has been directed towards the shrubby-growing Begonias and their value for various decorative purposes. Varieties such as President Carnot and Luzerna have of late made considerable headway in popular favour, while the old *Begonia coccinea*, a tall-growing species from Brazil, with large, pendulous clusters of scarlet flowers, is, as a rule, much better grown than it used to be. Between this just-named species and the white-flowered *Begonia Dregéi* the variety *carminata* was raised some years ago by Messrs. J. Veitch and Sons; indeed, it was given an award of merit on July 9, 1895. For greenhouse decoration during the summer months it is of considerable merit, while its season of beauty often extends well on into the autumn. It forms a neat, bushy specimen, which will bloom freely when from 18 inches to a yard in height. The flowers, which are borne in drooping clusters, are of a pleasing carmine rose tint. This *Begonia* is readily propagated from cuttings, and the young plants so obtained grow away freely. As a greenhouse flowering subject it is one of the most useful, and is deserving of extended cultivation.—**H. P.**



JAPANESE IRISES BY THE WATER-SIDE IN A READER'S GARDEN.

THE ROCK AND WATER GARDEN.

PLANTING A ROCK GARDEN.

NOW is the time to plant a rockery, the earlier the better. It gives the plants an opportunity to become established before the winter sets in, and this specially refers to early spring flowering alpines, for they then give a better show of bloom. Where special care can be taken and protection given, rock plants can be planted in nearly any month of the year. A low rockery made in front of a herbaceous border or shrubbery can be planted to make a very effective display with dwarf alpines of bright colours

Easily-grown Alpine Plants.—Alpine plants, which thrive well in any ordinary soil, are not grown so extensively in small gardens as they ought to be. Alpines can be obtained in a variety of colours, including white and rose to deep red or crimson. *Dielytra eximea* has reddish purple blossoms in drooping racemes, with a groundwork of Fern-like foliage, which gives the plant a beautiful effect. *Draba* forms a beautiful carpet, and usually flowers in April. In *bruniceifolia*, yellow, and *dodeana*, snow white, we have two charming kinds. *Edraianthus* has flowers similar to the alpine *Campanulas*, bearing drooping, bell-shaped flowers of deep blue colour. *Epimediums* are charming rock plants, bearing small purple-crimson and yellow flowers and foliage of lovely soft green, which turns in the autumn to a most lovely bronze. Heath (Ericas), which prefer airy situations, are very useful for the alpine garden. *Genista tinctoria flore pleno* is a native shrub with slender branches and pretty double yellow flowers. *Gentiana acaulis*, too, with its intense dark glowing blue flowers, must not be forgotten. *Geum Rossii* is an acquisition, with its finely-cut leaves and bright yellow flowers, as is *Gypsophila prostrata*, beautiful in its spreading masses and loose, graceful panicles of white or pinkish flowers. *Iberis Little Gem* and *I. stylosa* are two neat varieties of Candy-tuft, and as white as snow. *Hypericum* (Rose of Sharon) must not be overlooked. *Hutchinsia alpina*, a neat little plant with shining leaves and myriads of pure white flowers, when established becomes a dense mass. It should be given an open position facing south. Last, but by no means least, are the *Helianthemums* or Sun Roses. No plants put forth brighter colours than these. They will grow in any soil, and are not particular to position, though they like sun for preference. There are many varieties, ranging in colour from pure white to the palest pink, sulphur to deepest yellow and orange, and deep rose to darkest red. Alpine *Phloxes*, *Campanulas*, *Sedums*, and *Viola cornuta* and varieties are all easily grown, and will thrive in almost any soil and position. J. L. E.

ALPINE FLOWERS IN SEASON.

Among many plants now in bloom none is more interesting than the

pretty *Campanula carpatica* White Star. This has large, pure white flowers of a very bold character, and makes an unusually fine display. It is growing in the moraine section.

Tunica Saxifraga alba plena is a pretty and quite an uncommon plant. It is very graceful and free blooming, and is making a fine show.

Lewisia Howellii is flowering for the second time. This is also in the moraine section. I might mention here that we have all the set, and these are growing freely and are apparently quite at home.

FORTHCOMING EVENTS.

September 4. — Carlisle and Cumberland Horticultural Association's Show and Fruit Conference (two days). Kelso Flower Show. Glasgow and West of Scotland Centenary Show (three days).

September 5.—Preston and Fulwood Horticultural Society's Show (three days). Dundee Flower Show (three days).

September 6.—Leek and District Horticultural and Agricultural Show (two days). Kilmarnock Horticultural Society's Show.

September 7.—Société de Horticulture de Londres Meeting. Chorlton-cum-Hardy Horticultural Society's Show. Waterhouse Flower Show.

and spreading habit. There are many desirable plants with very free-growing habit which will become as bad as weeds if left to themselves. These should occasionally be trimmed up. Permanent rockeries should now be weeded, and in uprooting the weeds care should be taken not to disturb the roots of the alpines more than one can help. To have a successful rock garden, always secure plants with as long a flowering season as possible. Many plants are far ahead of others in this respect, and a very careful survey should be taken of a good collection.

Pratia Arenaria. a small creeping plant, is growing and flowering in full sunshine, although many people grow it in shade.

Philesia buxifolia is flowering quite freely in a position sheltered from the sun. Its Lapageria-like flowers show up very beautifully.

Mitraria coccinea, in a similar position, is now a mass of flowers, the scarlet blooms showing to great advantage among its bright green foliage. It is quite a large plant, measuring 5 feet each way.

Opuntias in Variety have been, and are now, in great glory, and have produced a quantity of blooms. They are extremely interesting, so rarely do we find them in outside positions. W. A. Cook.

Leonardslee Gardens, Horsham, Sussex.

THE FLOWER GARDEN.

THE MADONNA LILY.

THE most prized Lily of the garden, as it is also the most chaste, is the beautiful Madonna Lily,

as it were, by an environment well up to the standard of merit of the subject itself.

Such work might reasonably be called "planting for effect," and certainly far too much is done without any such aim or object. In the case of this Lily, however, such positions as those indicated may mean something more, the drier, poorer soils playing their part in keeping at bay—to some extent, at least—a leaf disease which is not infrequently of an overwhelming character when the plant is grown in richer soils and in more open places. The Madonna Lily is so prone to fail in what one might describe a good position, and succeed in quite unorthodox places and soils of a very diverse character, that no definite rule can be laid down respecting it.

Years ago the plant seemed quite indifferent to heavy soils or light or partial shade or full exposure, if occasionally, apparently by great height or vigour, displaying a preference to soils of a rather holding nature. It was not always so, however, and a long tenure of the soil or the reverse had almost invariably played a part. To-day, however,

periodical transplanting is suggested—far from it, since probably no Lily better repays for being left alone. Many, however, delight in adding to their existing stock, and all such should endeavour to get the work of planting done during the present month or as early in September as possible. In this way root-fibres and leaf-growth will be encouraged to develop in their season, and in turn enhance the chances of success. To delay the planting till late in the season or till winter has arrived is wrong, and one object of this note is to prevent a recurrence of work destined largely to result in failure and loss. E. H. JENKINS.

SWEET PEA NOTES.

Coarse Flowers.—I have been pleasantly surprised at the comparatively few really coarse blooms that have come under my notice. The season has been one which would be expected to favour this in soils that were heavily dressed with organic manures and had concentrated fertilisers as supplements, but the fact remains that I have seen fewer than last summer. There have been unmistakable indications of disappointment at shows when flowers on stems 20 inches or more in length were passed over for those shorter and infinitely more refined; but the march of education is steady if slow, and it seems probable that the ungainly, floppy caricatures of Sweet Peas have ceased to meet the approbation of the majority of judges. This is as it should be, for when once we lose the gracefulness, elegance and refinement of the Sweet Pea, its claim upon our affections will be gone. The delicious fragrance that was so characteristic of the older varieties is nearly lost. In a mass there is distinct perfume, but it is not as sweet as that of old and, unless I am much mistaken, there is not nearly the penetration about it. One wishes that this could be retrieved, but, failing that, the other charms of the flower must be retained inviolable.

A Six-bloom Stem.—A regular reader of THE GARDEN is proud of a six-bloomed stem, but unfortunately he does not give the name of the variety which produced it. He writes: "I picked from my garden a six-bloom Sweet Pea on August 23. Each bloom was perfect and each had a separate stalk. My gardener

thought it uncommon, having never seen a six-bloom one before. The blooms grew on a thick, rather flat stalk of good length, and did not appear to be two stalks growing together." There seems little doubt from my correspondent's own description that the stem was a fasciated one. These have been by no means uncommon this year, and I have heard of several sixes.

A Surrey Record.—When one speaks of Surrey in connection with Sweet Peas, one's mind involuntarily turns to Addlestone and Mr. Stevenson's wonderful record as a grower and an exhibitor; but the reader to whom I wish to allude now is Mr. A. W. Lambert, gardener to Mr. P. E. Pilditch, L.C.C., Bartropp Lodge, Weybridge Heath. With an interesting letter came two photographs which, although they are not quite suitable for reproduction in the pages of THE GARDEN, show clearly that

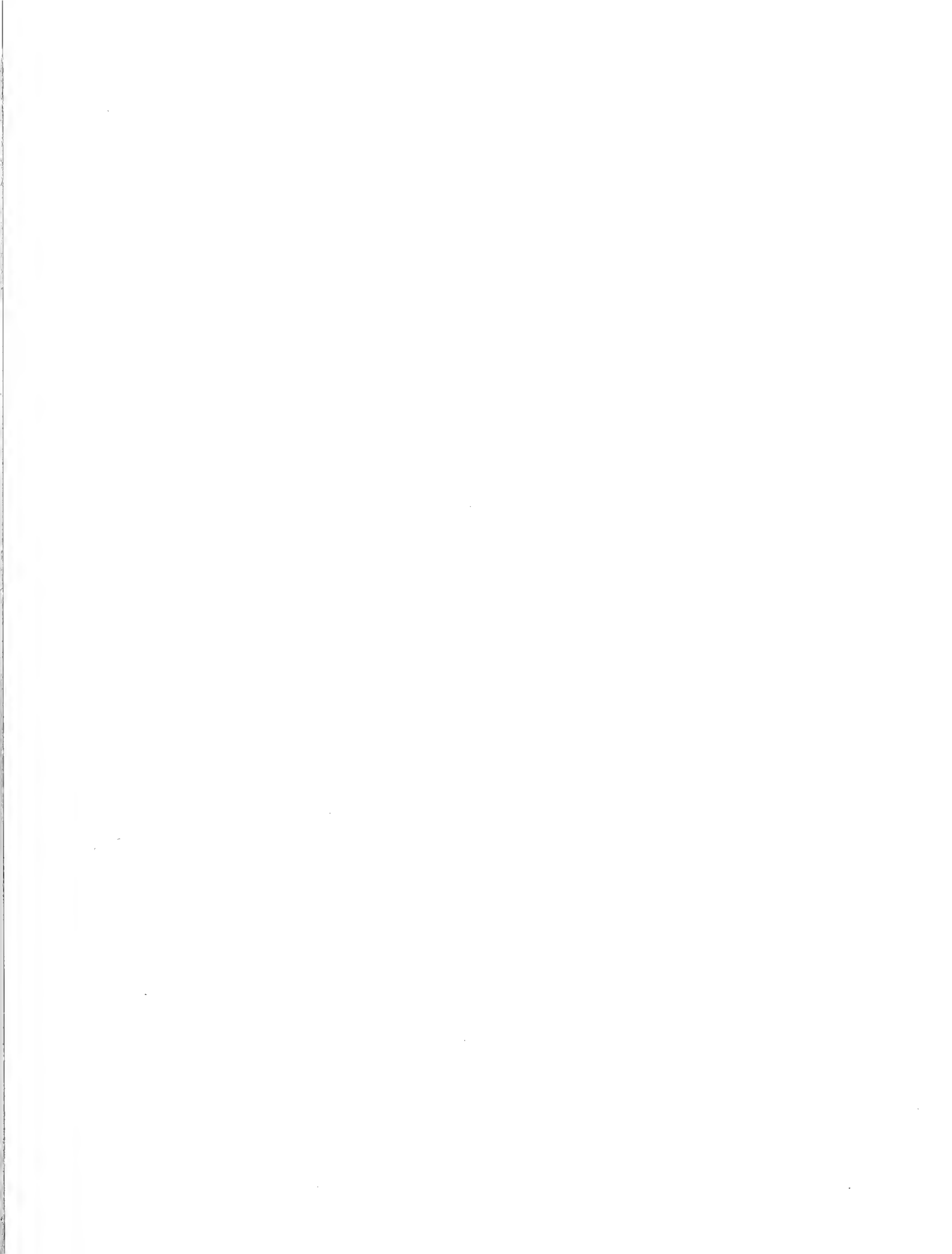


MADONNA LILIES, WITH A YEW HEDGE AS A BACKGROUND.

Lilium candidum, which is known to all. Not merely is it the admired of gardeners and gardening folk, since the poets of all ages have sung its praises, just as the artist has loved to paint it or the sculptor to reproduce, so far as is possible, somewhat of a sculptured beauty whose uniqueness none will deny. The best of such representations, however, fall very short of the real thing, and probably must for ever remain as examples of a "base, awkward imitation." In short, no picture of it could possibly equal the garden picture at its best—albeit that "best" is but rarely seen—the effect is best when the planting has been of the thoughtful order and care has been taken to so arrange the clumps or groups in near proximity to Holly or Yew or other dark-leaved subject, so that all the good of which the plant is capable stands out in bold relief—mirrored and framed,

the best-informed cultivators are seeking after a sign, and the most that can be offered includes a position of comparative dryness and not a little warmth, in conjunction with shallow planting and unmanured soils. Doubtless the disease which almost swept this unique Lily out of cultivation a score or more years ago greatly weakened the stock, a weakness from which no complete recovery has been made. But while one may not lay down dogmatic rules as to soil and other things, one can at least speak with emphasis upon the all-important matter of the

Time for Planting or Transplanting.—So nearly akin to evergreen is the Madonna Lily that only a short period of comparative inactivity exists between the flowering and the reappearing of a new basal leaf-growth, and the work of transplanting should be done at that time. Not that





THREE GOOD GLADIOLI :

“James Wm. Kelway” (left).

“Flaming Sword” (centre).

“Bala” (right).



MONTBRETIA STAR OF THE EAST, A NEW VARIETY WITH FLOWERS $4\frac{1}{2}$ INCHES IN DIAMETER.

Mr. Lambert is an exceptionally skilful grower, and if he is not already a member of the National Sweet Pea Society and an exhibitor at its exhibitions, the sooner he remedies the fault the better it will be for his reputation. I am pleased to see that such excellent results are achieved at Bartropp Lodge on plants grown in the old-fashioned way on Hazel sticks. One picture shows a vase of three stems, including Mrs. Hardcastle Sykes with five blooms, Helen Lewis with six blooms, and Tennant Spencer with eight blooms, but the second and third named have every indication of being fasciated stalks. Mr. Lambert sends some interesting details about his collection, which comprises the best varieties in commerce, and I congratulate him on his success. His letter concludes with a reference to what he aptly describes as a Sweet Pea freak that carried no fewer than twenty buds.

Double Standards.—I do not suppose I shall be the first to inform the Sweet Pea loving public that the committee of the National Sweet Pea Society at a recent meeting decided that the prizes recommended by several judges for exhibits containing blooms with double standards should not be awarded. I am extremely glad of this. I am keenly alive to the disappointment that it will cause, but it is imperative that a society shall stand by the rules published in its schedule if it is to go on from strength to strength and retain the respect of its members. The point which we shall now await is the abolition of the rule or regulation which decides that the inclusion of flowers with double standards will disqualify. H. J. WRIGHT.

MONTBRETIA STAR OF THE EAST.

As described in our last issue, page 431, this remarkable variety has advanced by a single bound at least a decade from all its fellows, outdistancing the best of them in size, colour-tone and refinement. When shown at the meeting of the Royal Horticultural Society on August 13, it created quite a sensation, and received the high

award of a first-class certificate, a very exceptional mark of honour for a florist's flower. The individual flowers measure $4\frac{1}{2}$ inches in diameter, and are of a fine orange red tone, borne on branching spikes which promise a long succession of flowers. It was shown by that successful raiser of new Montbretias, Mr. G. D. Davison, The Gardens, Westwick, Norwich.

AN EARLY MICHAELMAS DAISY.

INDIVIDUALLY the flowers of *Aster acris* are not specially attractive, as they are so starry as to please comparatively few. Yet when seen on the plant in a mass they are valuable in the border, and one has even seen this Starwort employed in the exhibition stand with a distinct gain. Yet it is as a border or wild garden plant that it is best. Its defect is that it requires support, as it is almost hopeless to expect it to remain erect, unless in the most sheltered position, if unsupported by a stake. It forms such quantities of flower that the thin stems cannot support the weight of the inflorescence if there is much wind or rain. Unless the staking

is attended to timeously, the stems are twisted and a good plant of reasonable neatness becomes hopeless. If staked and tied in good time, it makes, however, a handsome plant, the small, neat foliage harmonising well with the starry purple flowers. There is a pink variety, and also a dwarfier-growing one called *A. acris nanus*, together with one called *A. a. draconuloide* with large, pale lilac flowers. I am far from saying that *A. acris* and its varieties rank among the *élite* of the Starworts, but their early-flowering habit is acceptable to many, and one would be unwilling to lack their flowers in August. S. A.

PLANTING HARDY FLOWERS.

WHAT are hardy flowers? They are plants with flower-stems which die down to the ground yearly, but, having rootstocks, remaining alive during the winter. Therefore they come under the same category as hardy perennials. Most hardy flowers should be planted (with few exceptions) now and up to the middle of November. Such things as *Pyrethrum*, *Tritomas* and *Scabiosa caucasica* are best left over until the end of March or the beginning of April. If one wishes to be successful in growing hardy plants, the border or bed must be properly prepared. This is the first step in the right direction. There are so many different varieties and species of hardy flowers that it would be impossible in these columns to write of the requirements of all, so I write broadly of what will answer the purpose for most of them. The ground

should be thoroughly well trenched or dug two or three spades deep, so as to loosen the soil, care being taken to get the best soil at the top. During the trenching or digging well-decayed stable manure should be added, spreading it well about in the trench, as this offers a good opportunity of getting it well mixed with the soil. J. L. E.

COLOURED PLATE.

PLATE 1453

THREE GOOD GLADIOLI.

DURING recent years few flowers have undergone such vast improvements as the Gladiolus, and the modern forms now rightly claim a place in the very forefront of our hardy border plants. Their simple cultivation, stately bearing and beautiful colours endear them to all, and they add a touch of brightness to our gardens at this season when it is most needed. The improvements that have been effected have not been in one direction only; the entire plant has been changed, in most directions for the better. By careful hybridisation such firms as Messrs. Kelway and Son of Langport have given us plants of greater vigour, larger flowers, and such a wide range of colours as our forefathers would have thought impossible. The accompanying coloured plate has been prepared from flowers kindly supplied by Messrs. Kelway, and represents three of their newer varieties. When the tops of Gladioli have been blackened by frost, the plants should be lifted, with their leaves entire, and hung up in a cool, airy but frost-proof place to dry. When thoroughly dry, the tops and any other refuse may be removed and the corms stored in a cool but frost-proof place for the winter.



A NEW HYBRID FOR THE GREENHOUSE: HEMANTHUS ANDROMEDA. (See page 438.)

THE GREENHOUSE.

A HYBRID HÆMANTHUS.

ON page 437 we give an illustration of the new *Hæmanthus Andromeda*, which received an award of merit from the Royal Horticultural Society at a recent meeting. It is a showy variety of light orange scarlet colour, and was exhibited in grand form by Mr. Cory, St. Nicholas, Cardiff. The following observations regarding the origin of this novelty have been sent to us by Mr. C. G. van Tubergen, jun., of Zwaneburg, Haarlem: "Referring to your note on *Hæmanthus Andromeda*, may I inform you that this hybrid has been raised in my nursery by crossing *H. Katherinæ* with *H. magnificus*, the former being the seed-bearer. A hybrid of a somewhat similar character has lately been raised in Germany by crossing *H. Katherinæ* with *H. puniceus*. The latter hybrid, which goes under the name of *H. King Albert*, is, however, neither so free flowering nor so large flowered as *H. Andromeda*, probably owing to the fact that here a special variety of *H. Katherinæ* was selected as the seed-bearer, and also because *H. magnificus* is larger flowered and altogether a better plant than *H. puniceus*. By crossing *H. Katherinæ* again with *H. Andromeda* I obtained a still larger-flowered hybrid than *H. Andromeda*. This secondary hybrid I named *H. Flora*."

ZONAL PELARGONIUMS FOR FLOWERING IN WINTER.

If we take the size of the plant into consideration, I daresay we should find, if a census was taken, that more Zonal Pelargoniums were grown in pots in this country than any other kind of plant. It is a plant that may be had in flower all the year round, and when the right varieties are grown their freedom of flowering is very marked. No wonder, then, that amateurs generally favour such a valuable subject for the furnishing of their greenhouses and conservatories, as the display made is a brilliant one, and especially cheering during the dull days of winter.

The Small Plant.—The value of the small specimen cannot well be over-estimated, as directly a cutting is rooted it produces a truss of blossoms, and usually the truss is an exceptionally fine one, so the cultivator has not long to wait after the insertion of the cutting for the flowers to appear.

Inserting the Cuttings.—About the end of August cultivators who wish to have some nice flowering plants in the depth of winter and in spring should insert cuttings. The latter are usually quite plentiful at this time, but after a

sunless and cool summer, such as we have experienced, the stems will be very sappy, and much care is necessary in dealing with them, else there will be loss through damping. The best compost is one of fibrous loam and leaf-soil in equal proportions, with sufficient sand to make all porous, this sand being added when the compost is first mixed. More sand must be placed on the surface of the soil in the pots just before the cuttings are put in. Some cultivators make use of the ordinary garden loam, but this turns sour, is fibreless and quite unsuitable. Manure must not be mixed with the compost, but some well-rotted manure may be placed in the bottom of each pot on the

soil firm around each cutting, give a thorough watering, and then place the pots in a warm frame or on a shelf in a greenhouse and admit plenty of air, but do not overwater. As soon as the cuttings are well rooted, repot them in 3-inch or 4½-inch pots and still retain them on warm, dry shelves. Much feeding must not be done before the first week in February, as it would induce a sappy growth at the expense of flowers.

Double-flowered Varieties.—King of Denmark, rose salmon; Improved Raspail, deep orange; Hermine, pure white; Gloire de France, salmon and white; Dagata, rosy mauve; Fascinator, orange, salmon and white; and Golden Glory, orange.

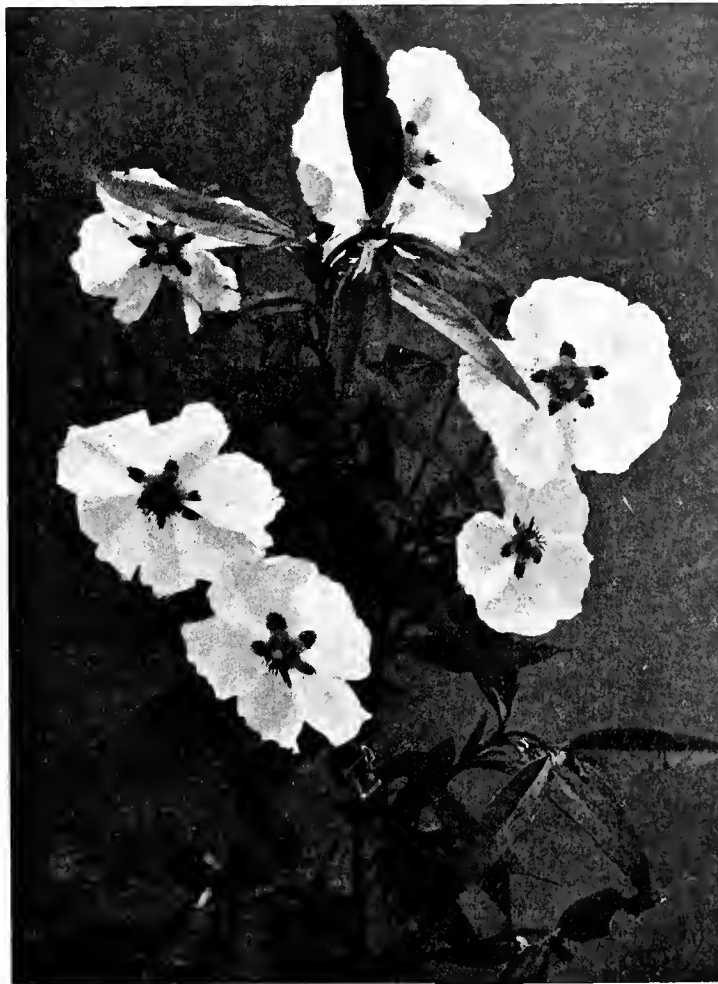
Single-flowered Varieties.—Phyllis, cerise; Lady Folkestone, blush pink; Barbara Hope, salmon pink; Mrs. Ewing, pale salmon; Mary Beton, white; The Sirdar, scarlet; and Paris, white and pink. Avon.

FLOWERS FOR GREENHOUSE BASKETS—SCHIZANTHUSES.

THESE are lovely plants for greenhouses and conservatories, and amateur cultivators who wish to have a nice display of blossom in the spring and early summer days cannot afford to be without a batch of plants. The strains now on the market are much superior to those one met with even a dozen years ago. There are hundreds of glass structures in town and suburban gardens which are only just sufficiently heated to keep out frost, and the owners often experience some difficulty in selecting plants which will survive the occasional low temperatures which must prevail. Schizanthuses are really not difficult plants to grow, and they will thrive in the average greenhouse. Seeds should be sown now either in pots or pans, and the resultant seedlings duly transplanted into the smallest pots.

In the first case it is necessary to disturb the roots of the seedlings and pot them separately. When one or two seeds are sown in a tiny pot, if more than one plant appears, all except one must be removed at a very early stage. The single specimen should be repotted, first, in a 3-inch pot, then in a 3½-inch pot, afterwards in a 5-inch pot, and finally, in a 6½-inch or 7½-inch pot. Usually, however, the single plants are flowered in 6½-inch pots. Give the young plants cool-frame treatment until the middle of September, then place them on a very sunny shelf in a greenhouse, leaving them there until the end of February. From that date until the flowering stage a position on a front bench in a greenhouse is the best for the plants.

Loam, leaf-soil and sand should be used for raising the seedlings in; manure is not necessary nor desirable. At the first and subsequent repottings a small quantity of well-rotted manure may be added to the compost, also some old mortar rubble. The variety *wisetonensis* should be pinched to



A SPRAY OF *CISTUS CYPRIUS*, A LITTLE-KNOWN ROCK ROSE OF HYBRID ORIGIN.

drainage material. Fill the pots as follows: First put in a hollow potsherd, then several smaller pieces. On the latter place a small portion of fibrous turf or several half-decayed leaves, and then the rotted manure, filling up each pot with the mixed compost and making it moderately firm. Use 3-inch pots for the cuttings, inserting one only in each pot; then, in due course, the rooted cutting can be repotted. Select cuttings with short joints and leaves of medium size, not those with sappy stems and large, succulent leaves. Remove the lower leaf and all the prominent scales from the stems, as these if left on will decay and result in the decay of the stem itself. Make the

cause a branching habit. Two pinchings will be enough; the flowers will then be large ones. Too much stopping weakens the shoots, and the latter then bear smaller flowers. Judicious feeding is very beneficial when the plants have well filled their pots with roots after the final potting. A beginner should grow the variety *wisetonensis* first, then add other varieties, such as *S. retusus* and *S. Grahami*.
SHAMROCK.

TREES AND SHRUBS.

ROCK ROSES.

THE Gum Cistuses, or Rock Roses, are a showy family of evergreen shrubs, and so easily grown that at least one or two should find a place in the warm corner of the smallest garden. The delicate nature and attractive colour

of the flowers, in particular those with large glistening white blooms, prettily spotted with dark crimson, make a gay show during the summer. In open positions, except in mild localities, most of the species benefit by protection in winter, as, being natives of South Europe, they are only sufficiently hardy to stand mild winters. The covering provided may be Bracken, Yew or Spruce branches. The best position for the more tender Rock Roses is at the foot of a warm south or south-west wall. Light loam, well drained, is the most suitable soil, as the roots are impatient of excessive moisture in winter. Seeds, cuttings and layering form ready means of increase. Sow the seeds in spring in a cold frame or slightly-heated greenhouse, using light, very sandy soil; prick off in boxes or pans, and later pot off each plant singly. Keep the young plants in pots in the frame the first winter and plant out in spring. August is a good time to insert *Cistus* cuttings in a cold or slightly-heated frame. Layering may be done in spring or summer.

A glance at the illustration is sufficient evidence of the free-flowering qualities of *Cistus Loretii*, a hybrid between *C. ladaniferus* and *C. monspeliensis*. The plants last in this condition for some weeks, for though the individual flowers are very fleeting, others open in rapid succession. *C. Loretii* is also distinctly valuable, as the flowers remain open in the afternoon much later than those of most of the species. The flowers are white, with the familiar five dark blotches. It forms a nice shapely bush 3 feet or more in height. *C. cyprus* (see illustration on page 438), is also a hybrid, 5 feet to 6 feet or more in height, the result of crossing *C. laurifolius* and *C. ladaniferus*. This plant is, unfortunately, figured in the *Botanical Magazine*, t. 112, as *C. ladaniferus*, a species from which it is markedly distinct, the most important being that while the flowers of *C. ladaniferus* are solitary, those of *C. cyprus* are in clusters of three or more. *C. ladaniferus* is also not so hardy. Both have the white spotted flowers. *C. albidus* is one of the most familiar purple-flowered species. The name, which to some may appear strange for

a plant with purple blossoms, refers to the leaves, which are clothed with a dense white tomentum.

The hardiest species of the genus is *C. laurifolius*, which is a vigorous grower, reaching a height of 6 feet or more. The large green leaves and pure white flowers, combined with the previously mentioned qualities, make this one of the most desirable and useful Rock Roses.

THE KITCHEN GARDEN.

TWO TROUBLESOME TOMATO DISEASES.

EVERY summer season brings to Tomato-growers at least two diseases and numerous specimens of them to the Editor. Both can, partly by cultivation, partly by spraying, be avoided to a large extent.

it is apt to be ric, for then the ideal conditions for the germination of the spores are present, yet I have met with growers who pride themselves on the fact that "we never ventilate," and their houses have not belied them. A too rich soil, encouraging rank growth, also lays the plants more open to attack. The maintenance of a fairly dry, buoyant atmosphere is a great aid to keeping the pest at bay.

Black Spot of Fruit.—The second trouble which is so common is the disease known as black spot. The fruit is attacked by a fungus called *Macrosporium solani*, and a black patch, somewhat depressed below the general level of the skin of the fruit, is produced. This patch is often at the "eye" end of the fruit, but not always only there. The spores are produced after a time, and may be carried to other fruits, on the feet of insects and in other ways. The important point is that the fungus can gain entrance, at



THE FREE-FLOWERING ROCK ROSE, *CISTUS LORETTII*.

Leaf Spot.—The first is the Tomato leaf spot, due to the fungus *Cladosporium fulvum*. Large yellowish spots appear on the leaf, and the thick felt of fruiting fungus branches of a brownish colour on the under surface of the spots. The spores from these branches are scattered by the wind, spraying, picking, insects and so on, and each is able to start a new centre of infection if the conditions are suitable. They are so minute that they may be present through the winter in any crevice in the house, on any piece of refuse Tomato plant and so on, and quite without their presence being known.

The disease is known almost wherever Tomatoes are cultivated under glass, but I have never seen it in the open air. Growers who ventilate their houses whenever possible are rarely troubled to any serious extent by this disease; but where a close, somewhat moist atmosphere is maintained,

least most readily, perhaps only into the fruit through cracks in the skin, so that the grower's aim must be to keep the fruit from cracking as far as he possibly can. The disease occurs both indoors and out. Fresh manure used in the compost seems to encourage the growth and attack of this fungus, and it should be strenuously avoided. A sufficient supply of potash aids in keeping the skin from cracking, and it may be applied now and then in the form of a solution of sulphate of potash in water at the rate of about half an ounce to the gallon. An irregular water supply also conduces to cracking, as may be readily seen in Tomatoes grown outdoors. Spraying, together with the removal of diseased parts, is also an important preventive means, and the best spray to use is undoubtedly home-made Bordeaux mixture such as is used in spraying Potatoes, provided always the materials are pure. SCIENTIST.

LETTUCE DUKE OF CORNWALL.

FREQUENTLY in the culture of vegetables or salads some few varieties stand out with greater prominence than others, and when well known become standard varieties owing to their general excellence. The above Lettuce comes under this category, as it has this year and last summer, during a period of great heat and drought, proved of great value, being of splendid quality and remarkably tender. Duke of Cornwall hails from the West of England, as its name implies, and has received an award of merit from the Royal Horticultural Society for its excellence. From seed sent by Messrs. R. Veitch, Exeter, at the trials of the National Vegetable Society the above was most noticeable for its perfect growth and crispness in a season when Lettuce was somewhat poor. There is no variety that I have grown which remains sound for a longer time when fully grown, and this is a great advantage. In addition, it is large, with a firm heart, and the outer leaves are much crested, in this way somewhat resembling Endive. Grown in good land, the plants often weigh as much as 3lb. or 4lb. and, having a flattish growth of the Drumhead type, with large, compact hearts, there is no waste, thus making it more valuable. Without doubt this is one of the best summer Lettuces we have of the Cabbage variety. W.

THE FRUIT GARDEN.

THE PACKING OF APPLES AND PEARS FOR MARKET.

THE growing of fruit for market has in the last fifteen years undergone a great development. The market-grower of thirty years ago was, with a few notable exceptions, a farmer who devoted some part of his land to fruit culture, and the fruit was grown on standards in grassland in the majority of cases. The increasing tendency towards specialisation has not left the fruit-grower untouched, and now all the leading men are devoting a large portion, if not the whole, of their land to fruit alone.



CALIFORNIAN APPLES PACKED FOR THE ENGLISH MARKET.

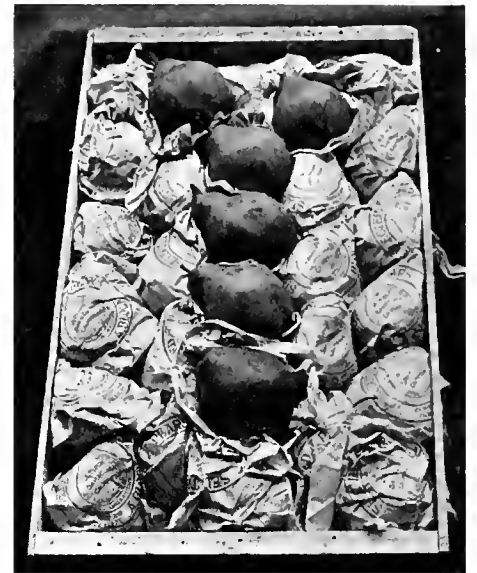
This development has had many important influences, and perhaps the greatest has been the abandonment of standard trees for bush trees or half-standards, and their culture on arable land. These modern growers were soon convinced that the most important factor for success was the selection of a variety suited to their soil and of high cropping powers, coupled with a firm flesh, which would enable the fruits to be marketed in good condition, and production of a sufficient quantity to supply the market for some considerable time. This led to a stringent selection, and the result is that in place of the dozens of sorts which formerly were marketed, most growers are now content with some half-dozen or less.

The next consideration was how to get the fruits to the consuming centres with a maximum of expedition and a minimum of damage. The bushel basket has many disadvantages which are obvious, and the alternative, the copying of the boxes of our Colonial and American competitors, was considered, and has now been adopted by very many of the larger growers. Perhaps the principal advantage of this method of packing is that it enables the producer to establish a brand, or trade-mark, thus obviating the disheartening practice which formerly lumped the good and bad together, and so lowered the price of the best to an average below its real merits. The box has, in the opinion of the writer, too many advantages to allow such small discouragements as will always fall to the lot of an innovation to check its adoption. It is evident, however, from the interesting show held at Ashford last year, when all fruit was exhibited in boxes, that some considerable practice and skill is needed for such efficient packing as we see in the case of Canadian and other foreign Apples. Various systems of laying the fruit in the boxes have been proposed, and these will vary according to the shape and size of the fruit.

The accompanying illustration of Apples shows what is called the "three two" pack, which is generally used for medium-sized fruit. The layer below will be laid on the same system, except that the "two" will come over the "three," resting in the depressions between those below. When smaller fruits are used they are often placed in equal rows, and the largest often permit but two abreast. It is most important that a standard size box should be used, and a useful size is 20 inches long by 14 inches wide and 10 inches deep.

In packing, the box is started upside down; that is, the fruits are piled in from the bottom of the box—that is, on the lid of the finished box—this being placed, of course, upside down, where it is desired that the fruit shall be the right way up when the box is opened, as in the illustration. Great judgment is necessary in filling the box, so that the fruit shall bulge slightly above the box. This is necessary so that, when the lid is nailed on, it shall act as a spring and hold the fruit firmly enough to prevent it moving, but not so firmly as to bruise. The fixing of the lid requires a clamp or press, which is a table having two metal arms, which seize the lid and, when pressure is applied to a foot-lever, press it down so that it can be nailed on. The nails must only be driven in at each end of the box, or the virtue of the "spring" of the wood lid will naturally be lost. The only other necessary appliance is a broad table, on which a good amount of fruit can be spread to enable the packer to select fruit of suitable sizes.

The packing of Pears is, from the softer nature of the fruit, a still more delicate matter, and here I would suggest that for all the more tender varieties the necessary firm packing should be



THE CALIFORNIAN METHOD OF PACKING PEARS FOR COVENT GARDEN.

gained by filling the box less full and covering with wood-wool and compressing this when the lid is affixed, so that the actual contact of wood and fruit is avoided. The use of paper on choicer dessert fruits adds much to their appearance, and gives at the same time a chance for the grower to get his name or brand noticed. An attractive label on the outside of the box is, of course, a necessity, and when a reputation is once established, this should sell the fruit without the need of opening the box. It cannot, of course, be too much emphasised that strict uniformity of sample and grade is the essence of success, and such a practice as "topping" not only damages the perpetrator, but also the whole fruit industry.

Care in gathering and storing is only one degree less important. That it will be difficult to educate packers there is little doubt; but I cannot believe that this is impossible of accomplishment with patience in this country as well as in others. The future of the fruit industry in this country depends upon improvement in distribution perhaps more than in any other direction, and that the systems of box-packing will aid in this direction cannot be open to doubt. The greatest credit must be given to the authorities at Wye College, Kent, for the impetus they have given to this matter, and those interested should write and enclose 6d. for a most interesting pamphlet, in which the various systems are described and the fullest directions given.

But why should the box method of packing stop at Apples and Pears? Plums and Cherries in America are marketed and sent for enormous distances in boxes, the latter fruit being packed in small boxes holding about a pound. Plums, if gathered early enough, would travel quite safely if well packed in boxes holding a dozen pounds or so, such as we see the Gages in which are sent from France and Spain to this country in such large numbers. I hope some enterprising grower will experiment in this direction, as the glut of Plums in Kent and Worcester, coupled with the extravagant prices asked in towns distant from these counties, make it evident that a market often exists which difficulties of distribution only hinder from being supplied.

Maidstone.

A. E. BUNYARD,

GARDENING FOR BEGINNERS.

HOW TO RAISE AND GROW HOLLYHOCKS. ✓

ALMOST everyone is familiar with the Hollyhock, for it is suitable alike for the town and the country garden, while the border must be a very small one which cannot find a place for a group of three or four plants. The

Hollyhock is one of those good old-fashioned herbaceous subjects seldom missing from pictures of gardens of bygone days. Hollyhocks were at that time extensively propagated from cuttings, named varieties being popular. Present-day strains of seeds are so pure and reliable that seedlings are now largely depended on, for as a rule they are less susceptible to disease. The tall, stately habit of the Hollyhock is a valuable addition to any mixed flower or herbaceous border, particularly those of considerable size, while masses in shrubbery borders or single plants growing up among the shrubs add considerably to the beauty of the garden.

Both the single-flowered and double-flowered Hollyhocks may be readily raised from seeds, coming very true to colour, and, unlike the Carnation, if one sows seeds from double Hollyhocks the seedlings all come double, and seedlings from single Hollyhocks all have single flowers. Both double and single varieties are notable for their rich and varied colours. Seeds may be purchased in mixture or in the following colours separately: Double—white, cream or sulphur, yellow, flesh, pink, rose, red, crimson, orange yellow and rose pink; single—white, yellow, pink, rose, deep red and other colours.

How to Raise Seedlings.—The raising of seedling Hollyhocks presents no difficulties to the cultivator. Seeds may be sown thinly in the open ground in drills from April to June, in a cold frame or cool greenhouse in August and September, or in a heated greenhouse during January or February. Strictly speaking, the Hollyhock is a hardy perennial, the roots lasting from year to year in the ground, pushing up annual growths which flower in summer. So readily are they raised from seeds that it is quite easy to treat the Hollyhock as a biennial, or even as an annual by sowing the seeds in heat early in the year.

Treatment of Seedlings.—The April to June raised seedlings should be transplanted about nine inches apart when ready during the summer, moving them to their flowering quarters in March. Seedlings raised in frames in late summer and autumn may be pricked off in boxes when ready, keeping these in the frame during the winter, and potting off singly about February preparatory to

planting outside during April. The procedure for the January or February raised seedlings will be similar, except that when pricked off in boxes they should be kept in heat till growing freely, and they will not be ready to plant outside till May.

How to Grow the Plants.—Hollyhocks will grow in most soils, yet no plants yield better

carmine. Double—Black Knight, dark crimson; Eucharist, yellow; Flora, pink; Stephen Phillips, rich rose; White Lady; and Viscount Wolseley, rich red. Named varieties are propagated by cuttings in late summer or spring and by division of the clumps, March being a good time. Insert the cuttings in pots of light, sandy soil,

placing them in a cold or slightly-heated frame at the end of the summer or in a heated frame in March. Any difficulty experienced in keeping the named varieties during winter may be obviated by lifting the roots in late autumn and placing them in a frame for the winter.

The Hollyhock Disease.—The dreaded Hollyhock fungus (*Puccinia malvacearum*) may be kept in check by spraying with a solution of Condy's Fluid or permanganate of potash, and also with a mixture of soft soap and sulphur dissolved in water. Messrs. Webb and Brand, the well-known Hollyhock specialists, use the following mixture: Slake one peck of lime, and when cool add one peck of soot, 1 lb. of flowers of sulphur and half an ounce of sulphate of copper (finely powdered). Pass the mixture through a fine sieve and dust the plants well over with it three or four times during the growing season, preferably early in the day while the dew is still on the plants.



A GROUP OF HOLLYHOCKS. SEED MAY BE SOWN NOW IN COLD FRAMES.

results when planted in deeply-tilled and liberally-manured ground. A mulching of decayed manure is beneficial in May or June, and frequent waterings should be given during dry weather. By sowing seeds in April and September or early spring in heat, the season of flowering will extend from July until October. Three feet apart each way is a suitable distance to plant Hollyhocks. They grow from 8 feet to 12 feet high.

Good Named Varieties.—Would-be growers who have a fancy for named sorts are recommended the following: Single—Brooklands, white; Corona, yellow; Pom-pom, dark maroon; Rosy Morn, pale rose; Brodrick, rich red; and Penzance,

new shoots are freely made; but they do not bear flowers. The latter are borne on the young shoots made during the previous year, and if a sufficient number of these be left, not only will they flower freely, but the blossoms will be very large and pure in colour. The result will be, year after year, wreaths of the Mock Orange blossom. Furthermore, the plants will increase in vigour and their form be improved. Some of the older wood should be cut out and, if overcrowded, a few of the younger branches, too; then the remaining ones will mature and yield a plentiful crop of blossom the following year.

SHAMROCK.

PRUNING THE MOCK ORANGE.

THE flowers of this plant are very lovely during the latter part of May, throughout June and the early part of July. In some gardens, however, one sees very fine hushes which do not blossom freely, and this flowerless condition is chiefly owing to the wrong way in which the pruning is done. Old specimens, left unpruned from year to year, rarely fail to bear flowers, although the latter are small. If the young wood is cut back injudiciously, new shoots are freely made; but they do not bear flowers. The latter are borne on the young shoots made during the previous year, and if a sufficient number of these be left, not only will they flower freely, but the blossoms will be very large and pure in colour. The result will be, year after year, wreaths of the Mock Orange blossom. Furthermore, the plants will increase in vigour and their form be improved. Some of the older wood should be cut out and, if overcrowded, a few of the younger branches, too; then the remaining ones will mature and yield a plentiful crop of blossom the following year.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Lawns.—The grass will not need cutting so frequently now as it did in the earlier part of the season, but once a week at least the machine should be run over to remove the straggling growths and so improve the appearance. During damp weather rolling occasionally will be of great benefit, and especially to lawns or turf that were newly laid this spring. Now that it has become thoroughly settled, the edges may be cut into proper shape with the edging-iron. This work requires to be carefully done, and, where possible, should always be carried out to a line.

Bedding Plants.—Propagation during the next week or two will be in full swing, and many are the plants nowadays brought into the scheme of summer bedding. With some of the plants the full stock must be propagated at once, whereas with others it is sufficient to root a quantity for stock purposes and propagate again from them in the spring. The latter include *Iresine*, *Alternanthera*, *Mesembryanthemum*, *Ageratum*, *Cuphea* and variegated *Nasturtium*.

Lantanas are most effective, and standard plants take a considerable time to grow, but useful bushy plants can be rooted and grown on in the New Year from cuttings obtained from a few stock plants, which should be potted up and stood in a shady and sheltered place when the bedding is over, well watered in and wintered in a cool house.

Swainsona galegifolia alba is an attractive bedding subject, the white flowers being freely produced and harmonising well over almost any dark groundwork. A stock should be propagated at once by taking cuttings and rooting them in a warm house or pit with bottom-heat.

The Rock Garden.

Coroeka Cotonaster.—When the bulk of the flowering subjects are passed it is then that a careful selection of suitable shrubs, discriminately planted, proves a great attraction. This New Zealand subject is, to all purposes, practically hardy and exceptionally well adapted for planting on rockwork, being of slow growth. The branches are curiously intermingled, which, together with the small round foliage, makes it distinctly interesting.

Muehlenbeckia varians.—This is another shrubby subject eminently suited for trailing and generally associating with rockwork. It is of quick, rampant growth and well suited for covering barren places.

The Water Garden.

General Remarks.—Now that growth on the various subjects, both aquatic and semi-aquatic, is completed, before they die down and become dormant any alterations necessary to improve the appearance for next season should be noted. For instance, the more vigorous *Nymphaeas* will probably need restriction, and these, unless their position is marked, are difficult to find. Note what subjects succeed best by the water's edge, and plant more extensively if needs be. One of our showiest subjects for late summer was *Senecio Ledebourii*, throwing up large heads of yellow flowers on stout stems above bold and handsome foliage. If the Water Lilies become badly infested with aphids, as they sometimes do, spray with a good insecticide when the flowers are closed.

Plants Under Glass.

Malmaison Carnations.—As soon as the young plants are sufficiently rooted, sever the layers from the parent plants and very carefully lift with a hand-fork for potting up. For ordinary-sized plants 3-inch pots will suffice; but where a large number of roots have been formed, use slightly larger receptacles. Pot fairly firm and stand in a shallow frame facing south, and shade if necessary for a few days.

Calceolarias.—Continue to pot off into small pots the seedlings as they become large enough. As with many other subjects, do not discard the tiny ones, as oftentimes these are the best and eventually make not only the best plants, but possess the richest markings. Use an open compost and grow quite coolly. Stand the pots on inverted ones over a good bottom of cinder-ashes, so that slugs cannot reach the plants, and damp the surroundings often and shade from sunshine.

Cyclamen.—To obtain strong plants for flowering next autumn, seed-sowing must not be delayed. Whether the seed is sown and raised in heat, or allowed to germinate more slowly on a shelf in a cool structure, is a matter of opinion. Sow the seeds thinly in spare pans or boxes, so that there is no need to disturb them immediately they are germinated. Avoid an over-depth of soil and use plenty of drainage; then the compost will remain for some time in a sweet condition. Keep the plants due to flower this winter growing by the use of occasional stimulants and the free use of the syringe in warm weather, especially keeping them shaded from bright sun and their surroundings moist. As the flower-buds show colour above the foliage, remove them by pulling them clean out from the base.

The Hardy Fruit Garden.

The Fruit-Room.—Whatever this may be, the interior should be thoroughly cleaned out without delay and got in readiness for storing the fruit.

Gathering of Fruit.—This requires carefully attending to, and especially with Apples that are to be kept for some months. With the earlier-maturing varieties that refuse to keep satisfactorily it is not so important. When to gather is another question frequently asked, and this also has a great bearing on their keeping properties. With late keepers allow the fruits to hang as long as possible, unless, of course, they drop badly, when picking should be carried out, and even then many will be found to part badly from the trees; but do not be tempted by the first few to fall. Handle carefully and do not place too many in bulk. If possible, finally store in a single layer and on a base where the air can permeate through, and label the varieties accordingly.

Pears require especially careful handling, and should certainly not be placed any thicker than one layer, so that as they ripen they may be selected for consumption. Frequently examine these, otherwise many will over-ripen.

The Kitchen Garden.

Spring Cabbage.—The earliest plants of the first sowing should be planted out as soon as ready. It is a good crop to follow the Onions. Well dig the ground, working in any farmyard manure. Make firm and plant in rows 18 inches apart and 1 foot between the plants, so that in early spring the alternate ones can be removed for filling gaps, which often occur after a wet winter.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Lobelia for Stock.—Plants that have been doing duty in the greenhouse, as well as surplus ones in pots, must not be permitted to flower any longer, else they may damp off during winter. If there is none in pots, then delay no longer in taking rooted slips off old plants; but as a rule these cannot be depended on to winter safely.

Roses.—The first crop of flowers passed off very quickly, but now the beds are again well furnished, and there is a great display of the late-blooming climbers. Mildew has been apparent owing to the very wet weather, especially where the beds are confined. Any weak or decaying wood should be cut clean out if it has not been done already. It helps *Aimée Vibert* considerably to shorten the bloomed-out shoots, the late crop of blooms soon covering the plants again.

Making Up Blanks.—*Chrysanthemums* and *China Asters* will be found of much value now and later to fill up blanks made by earlier-flowering plants. These and many other plants transplant successfully with very little care. I invariably find that men attempt to lift too much material with each plant, which causes the ball of soil to split. No more soil than will attach itself to the plant should therefore be lifted. The ground should be well stirred previous to planting, the plants set deep into the ground, and the soil immediately saturated with water and kept saturated for a few days till new roots have protruded. *African Marigolds* should not be lifted till they are in flower, when the singles can be kept from the doubles, each being massed by itself.

Lilium candidum.—This is the time most suitable to lift and replant this Lily. It is a very

accommodating plant, which I have lifted in full growth without its exhibiting any signs of resentment. Like the *Hollyhock*, the disease is less obvious in some parts of the garden than in others. In a shaded part I have never seen the disease, and the flowers there succeed the earlier-flowering ones which are exposed.

Violets.—Plants which are yellow in the foliage will soon recover on being surface-dressed with a stimulating manure, pigeon-manure, soot, superphosphate, or a good proprietary composition being suitable for the purpose. Doubles, as a rule, do not show these symptoms of distress, but they also should be manured.

Indoor Fruits.

Strawberries.—It is full time for the potting of these. A strong yellow loam with a sixth part of desiccated cow-manure reduced to powdery fineness suits them best. A difficulty with the inexperienced in potting is that the plants are either put too low or too high in the pots, just level with the string of the runner being right. Hard potting is essential. After a few days, especially if the weather is hot, frequent waterings will be necessary.

Black Grapes.—To colour these properly they must have time; consequently a high temperature, especially at night, should not be attempted. Water at the root in sufficient quantity is another essential, and that slightly manorial is to be preferred to the pure liquid. It is not necessary to have much ventilation, generally a little—a few inches at most of the top ventilator open—being enough to ensure the health of the Vines. *Black Hamburgh*, as a rule, will be ripened, and to keep the colour a shading may be sprayed over the glass and the inside of the viney kept cool and dry. Dry straw spread neatly over the borders is a means to this end and saves the borders from drying, and in this way is a help to proper conditions.

Pot Peaches.—As the crop is gathered off each tree it may be taken out of doors, not crushing the trees together, but giving them plenty of room. Nor must they be neglected in the way of manure-water, the flower-buds for another year depending on the manner in which the trees are treated in the autumn. Rub off all superfluous growths and keep the foliage clean by regular washings with pure water.

Indoor Plants.

Pelargoniums.—Plants for autumn blooming should be transferred to a well-ventilated and light structure, in which the flowers will open in greater purity than out of doors. Slight applications of sulphate of ammonia and superphosphate give an added brilliance to the colours; but the plants, it must be remembered, are easily damaged if over-manured.

Calceolaria Burbidgei.—If plants of this *Calceolaria* are too pot-bound to flower sufficiently, they ought to be shifted into larger pots at once. Manurial feeding, which can be resorted to with many other plants, has little effect on this if the rooting space is contracted. As soon as the shoots begin to extend for bloom they must be staked efficiently.

Tuberoses.—Those potted late and which have been growing in a cool structure will soon begin to flower, and it will be necessary shortly to give them a higher temperature in order that the flowers may expand nicely. The plants will also need much more water at the root and a very short stick to each spike. It is often annoying to find a finished spike tied all its length, and needlessly, to a long stake.

Annuals.—Another sowing of *Schizanthus* may be made soon in 3-inch pots, as advised for the first batch; also of varieties of *Clarkia elegans* to flower in late spring. *Mignonette* should also be sown without further delay. This does well sown in 6-inch pots, thinning out the seedlings to the right number. A light, very rich compost suits them well, and they must never be allowed to suffer a check to growth.

Smilax.—Late-started material for Christmas and spring should be stringed before the growths get entangled. Linon thread is the best material to use, being strong for its thickness, and it does not readily break when drawing it from the cut sprays. Aphids occasionally attacks the plants, which may be syringed with a *Quassia* solution or else tinned.

R. P. BROTHERSTON.

Fyninghame, Prestonkirk, N.B.

DAFFODIL NOTES.

SOME MODERATE-PRICED DAFFODILS FOR SHOWING.

(Continued from page 431.)

Division III.a, Small Cups with Yellow Perianths.—It is surprising how comparatively few good flowers there are in this section with yellow perianths, when we consider the very large number of those with white. I think the word "whitish" in the Royal Horticultural Society's definition is partly responsible. "Whitish perianth" is there taken to cover such a flower as Firebrand, and this cuts out so many from the yellows that there are but an insignificant number left. In one catalogue in which I counted up the number of varieties listed under III. (Small Cups), I found seventy-two, and of these only thirteen were marked "a," that is, as having a yellow perianth. The famous old Barrii conspicuus is the best known by far, and even now is often seen at shows, not because there is nothing else, but because it can still hold its own. Castle and Occident are indispensable. The former has a very distinct and pleasing shade of a sort of coffee red in the cup, with good, smooth-pointed, pale yellow segments; whereas the latter is a rounder flower with a great deal of red in the crown. Unfortunately, as it is very late to flower, it is uncertain whether Northern growers will have it in bloom by the time it is wanted. Stonechat, Blood Orange, Fusilier, Yellow Poet, Glitter, Joan of Arc and Concord are other names that come to me as I write. The last is a very perfect show flower, and should be in every collection. The flat yellow crown with its narrow deep red edge is telling. Some day Furnace and Jasper will come under the description of moderate-priced flowers. They have the reddest cups of all Daffodils, and on this account are highly prized and priced. At least, ten guineas and fifteen guineas is getting on that way.

Division III.b, Small Cups with White Perianths.—I was going to say it is difficult to get a flower that is not in "III.b." It would be a pardonable exaggeration. Corresponding to this wealth of choice we find quite low-priced varieties will enable anyone to put up a collection of a high standard of excellence. Take these twelve: Cirlet, Incognita, Ethelbert, Cresset, Armored, Branston, Southern Star, Sunrise, Red Chief, Fair Maiden, Egret and Eyebright. Sunrise is priced about half-a-guinea, but I think none of the others is over six shillings. They are a magnificent lot, and, if they are well grown and tastefully staged, would not have to hide their heads and think they were Cinderellas even beside such proud beauties as White Star, Cossack and Challenger. In the baker's dozen just mentioned we have four famous varieties: Incognita, with its eye of pale warm brick red and long white almond-shaped segments, comes near to the charmed circle of "great flowers." If everywhere was Lissadell, I think if it knocked for admission it would be admitted; but, alas! I cannot grow it to get such colour as they do over against the Atlantic; neither, I fear, can one reader in fifty. Ethelbert, which so charmed this year's chairman of the National Sweet Pea Society's committee, is an exquisite bloom, and the gentle up-and-down of its perianth is always greatly admired. We want more of this Almira-looking type. They are a welcome change from the perfectly flat petalled ones. Sunrise has a shallow orange yellow cup, with conspicuous rays of yellow running up each petal. It is highly effective on a stand and most distinct. Southern Star is after the

style of the old Crown Prince. It has a well-defined band of red round the edge of the cup, and long, rather pointed perianth segments. As Cossack now comes within my definition of moderate priced, I must call especial attention to it. It is superb for showing and quite the equal of more highly-priced all-red flat cups, and as I have grown it for three years I can testify to its being a good doer. A cheaper variety, with an all-red centre, may be had in Scarlet Eye. It is a very bright and pleasing flower, not so round as Cossack, nor has it such a deep-toned eye. With the mention of Red Beacon, which I remember so well at the great Haarlem Bicentennial, my list must close. It has a similar cup to the last two, and in quality and price comes about halfway between them.

Division IV., Leedsii Daffodils.—Although I see the appropriateness of such an omnibus section, I believe there is a sort of secret danger ahead if schedule-makers and judges do not recognise its *comprehensive* character. As the incomparabilis and Barri divisions have their white and yellow perianths to enable them to be split up, so I think the Leedsii might be divided into star-shaped and round. Nothing about any dividing up is said in the Royal Horticultural Society's definition; but that could easily be got over by a note in the requirements for this class to say that the judges will take into consideration in giving their awards the diversity of form among the blooms staged. Much as I love those beautiful white flowers like White Queen, Mrs. W. O. Wolsley, Venus and Empire, I would not like to see things like Countess of Southesk, White Slave, Ariadne and Bianca pushed on one side. They are so charming that it would be a Leedsii disaster indeed were they to be allowed to drop out of our shows. At present they *have to come in* simply because a dozen of such varieties as Empire, Hon. Mrs. Francklin, Elfrida Pearson, Mrs. W. O. Wolsley, Lord Kitchener, Czarina, Patrician, H. C. Bowles, Swashbuckler, Sirdar, White King and Lowdham Beauty are out of the question to all but millionaires. To show three flowers of each of a twelve like these would mean an outlay of something like £250 to £300. After all this, let me now select my dozen moderates. I know before I start the task will be difficult, not because I cannot find enough beautiful varieties to fill my requirements, but because I must leave out others almost equally lovely to my eyes, and perhaps more so to others. Here, then, is my selection: Moonbeam, White Queen, Countess of Southesk, Venus, Ariadne, Eoster, Bianca, Hoar Frost, Evangeline, Penguin, Queen of the North and Thora. If I omitted the perfect Moonbeam on account of its lateness, my choice would lie between Diana and Lucia. Most of these are known to my readers. Hoar Frost lives at Lismore, "a lovely flower when fully expanded; perianth and cup of pure white, the latter beautifully margined with a fine line of pink." Countess of Southesk—my Leedsii Frank Miles at Cork; Queen of the North shone forth once at least this spring from Messrs. Barr's usual stand just inside the door on the left-hand side of the Royal Horticultural Society's Hall; Thora, the lovely brunette, has been enticed to Bletchley. So now you know where the *rariores aves* of my "little crowd" are to be found.

Division V., Triandrus Hybrids.—In my humble opinion the prices asked are absurd. One consolation is they will probably soon get lower, for calathinus is a very potent pollen parent, and there is no reason why everyone should not raise his own. Most Daffodils will seed to calathinus. The loveliest are the pure white teacup-shaped ones which come

from such a cross as Minnie Hume and calathinus. To show what I mean about prices, I find in one list seventeen varieties. Of these only four are under a pound. Richard Strauss, Queen of Spain, Dorothy Kingsmill, Bennett-Poë and White Witch seem the only possible ones for shallow pockets.

Divisions VI. and VII., Cyclamineus and Jonquil Hybrids.—Cyclamineus hybrids may be omitted; so, too, may Jonquil hybrids, although I feel sure in time we will have this section much better filled up. Buttercup is the pioneer of this new race of rich deep Guernsey hutter yellow selfs. It is a very beautiful flower, and is bound to be a great popular favourite in the course of time.

Division VIII., Tazetta and Tazetta Hybrids.—From a show point the best are Elvira, Jaune à Merveille, Orient, Irene and Sunset. If a sixth is wanted, I would suggest Triumph or Aspasia. Jaune à Merveille has about five or six flowers of a pretty shade of soft yellow, with an orange yellow cup, often shaded with apricot. Orient has a pure white undulating perianth of much substance, with a pale yellow eye, with a very distinct thin red edge. Of the Polyanthus Narcissi, the best are Bazelman major, Mont Cenis, Maestro and Newton, but for practical show purposes they may all be neglected.

JOSEPH JACOB.

(To be continued.)

FUNERAL OF THE LATE ALEXANDER DEAN, V.M.H.

AMID many tokens of deep respect, the remains of the late Alexander Dean, whose death we announced in our last issue, were laid to rest in Kingston-on-Thames Cemetery on Monday last. Although the afternoon was exceedingly wet, there were a large number of the deceased's relatives and friends present. The Committal Service, which had been prepared by the deceased, was read by Mr. Philip Thomas of the Church of Humanity, Holborn, a sect of which Mr. Dean was a prominent member. In addition to his relatives, the following were among those present at the graveside:

Messrs. J. Cheal, representing the Royal Horticultural Society; the Mayor and ex-Mayor of Kingston; Messrs. Owen Thomas, V.M.H., W. Poupart, Brian Wynne, Horace J. Wright, F. W. Harvey, Editor of THE GARDEN; W. Tinley of the *Gardeners' Chronicle*, J. Naylor of *Gardening Illustrated*, E. H. Jenkins, W. Bates, E. G. Quick, hon. secretary of the National Vegetable Society; W. J. James, W. Hayward, W. G. Smith (Kingston), A. E. Burgess, Horticultural Instructor to the Surrey County Council; John Crook and T. Gibbons, Esber Court Gardens. Many members of the Kingston branch of the Humanitarian Society, which was founded by the deceased, were also present. The floral tributes were exceedingly beautiful and numerous, and included, in addition to those from his widow and other relatives, tributes from the members of the National Vegetable Society, of whose committee the deceased was chairman; the Kingston Liberal Association, Kingston Adult Schools, Kingston tradesmen, the Kingston Saturday Popular Entertainments Committee, Mr. G. C. Parnaby, J.P., Mr. E. H. Jenkins, the Editor of THE GARDEN, the *Surrey Comet*, Mr. and Mrs. Ryan, Mr. and Mrs. Hayward, and Mr. and Mrs. J. J. Shakespere.

SOCIETIES.

SHREWSBURY SHOW.

FAVOURLED with good weather on the opening day, the great Shrewsbury Show was held on August 21 and 22. It was a magnificent exhibition; indeed, by a general consensus of opinion it was one of the finest in the annals of the history of the Shropshire Horticultural Society. The magnitude and all-round excellence of the produce shown place this far-famed exhibition in the premier position among provincial shows. The show was again held in the beautiful grounds known as the Quarry. Competition generally was very keen. As usual, Grapes proved to be one of the strongest features, and the best growers in the country were brought into competition. The champion prize for the decorated fruit-table was won by the Duke of Portland, whose gardener, Mr. Gibson, succeeded in defeating the redoubtable Mr. Goodacre by a very narrow margin. Roses were far better than might have been expected, and the Silver Challenge Rose Bowl, presented by the president of the society, W. W. G. Philipps, Esq., brought out one of the finest competitions that have ever been witnessed.

FRUIT.

The keenest interest is always centred around the class for decorated fruit-tables. This is one of the features of this great show. There were only three entries on this occasion, but the tables were of the very highest order. The class is for thirty dishes, and the first three prizes are £25, £20 and £17 10s. Grapes, Apples, Melons, Peaches, Nectarines, Pears and Plums were to be seen in the height of perfection on the three tables in competition. There was very little between the merits of the first two competitors. The first prize was won by the Duke of Portland, K.G., Wolbeck (gardener, Mr. Gibson), who scored a fine total of 253½ points. With only one point between them, the second prize went to the Earl of Harrington,

shown, all of which had been grown at the Wisley Gardens, Surrey. Large gold medal.

Messrs. Thomas Rivers and Son, Sawbridgeworth, quite excelled themselves with an excellent collection of pot fruit trees. The collection included many Nectarines and Peaches, Plums, Apples, Pears, Grapes, Oranges and Figs. The arrangement was perfect and the quality of the very highest. Large gold medal.

The King's Acre Nurseries, Limited, Hereford, staged an excellent collection of pot fruit trees, including Apples, Pears, Plums, Figs and Grapes. For quality of fruit this collection was deserving of the very highest praise. The following Apples were remarkably good: Collini, Cox's Pomona, Peasgood's Nonsuch, Allington Pippin and Emperor Alexander. Large gold medal.

The attractive fruits of the Strawberry-Raspberry were displayed by Mr. B. Bowdler, Shrewsbury.

The first prize for a collection of twelve dishes, in not less than nine kinds, was won by the Duke of Newcastle, Worksop (gardener, Mr. S. Barker). This collection contained fine fruits of Apple Ribston Pippin and Pear Triomphe de Vicence; second, Lord Biddulph, Ledbury Park (gardener, Mr. H. Cotton); third, Alderman Bewley, Rathgar (gardener, Mr. D. M. McIntosh).

VEGETABLES.

As in former seasons, this section was again quite a leading feature, the entries being even heavier than usual. The quality throughout was excellent. The whole of the seedmen's classes were well contested and brought excellent competition.

In Class 112, open to all, for a collection of twelve distinct kinds, which brought seven competitors, the Hon. Vicary Gibbs, Aldenham House, Elstree, was an easy first with a splendid collection, including Celery, Leeks, Onions, &c. Mr. J. Hudson of Leicester came second with a meritorious collection.

For a collection of nine kinds, distinct, Class 113, there were five competitors. The judges had a great difficulty in awarding the prizes, the collections in each case being



THE FIRST PRIZE TABLE OF FRUIT SHOWN BY THE DUKE OF PORTLAND AT SHREWSBURY.

Elvaston Castle (gardener, Mr. J. H. Goodacre), who had 252½ points to his credit. The third place was gained by Lady Henry Somerset, Eastnor Castle, with 235½ points.

For twelve bunches of Grapes there was strong competition, and the first prize of £20 was won by the Duke of Westminster, Eaton Hall (gardener, Mr. Barnes); the second prize was won by the Earl of Harrington. The finish of the Muscat Grapes in the first-prize collection was quite exceptional.

For four bunches of Grapes, two bunches of a black variety and two of a white variety, Mr. R. J. Corbett, Towyn (gardener, Mr. J. Jones), was first with two capital bunches of Gros Maroc and two equally good bunches of Muscat of Alexandria. Second, Captain Heywood Lonsdale, Shavington (gardener, Mr. J. Mills).

Mr. J. Brinton, Stourport (gardener, Mr. W. H. Wilson), was first for two bunches of Black Hamburg Grapes.

For eight Peaches, the Duke of Newcastle, Worksop (gardener, Mr. S. Barker), was first with a superb dish of Crimson Galande.

For a single bunch of Black Hamburg, Lady Henry Somerset, Eastnor Castle (gardener, Mr. G. Mullins), was a good first.

For two bunches of black Muscat varieties, G. E. Lonax, Esq., Hayton (gardener, Mr. E. Jones), was first with two capital bunches of Madresfield Court.

For two bunches of Madresfield Court Grapes, Colonel H. C. Legh, Knutsford (gardener, Mr. A. J. Cooke), was first with a pair of handsome bunches.

Some excellent Alicante Grapes were seen in the class for two bunches. First, Mr. J. W. Raynes, Old Colwyn (gardener, Mr. J. Barker).

In the class for two bunches of any Grape not given in the schedule, Lord Harlech, Brogyntyn (gardener, Mr. T. Lambert), was first with two heavy bunches of Alnwick Seedling.

Grapes are always a strong feature at Shrewsbury, and not the least interesting exhibit was that of a collection of known and little-known varieties from the Royal Horticultural Society. About two dozen varieties were

very close. F. Bibby, Esq., Hardwicke Grange, secured the first prize, and Captain H. Lonsdale, Shavington Hall, second.

Class 114, which was for six dishes of Potatoes, brought very good and keen competition, there being twelve competitors in this class. Colonel Cornwallis-West secured the first prize with a fine collection, including such varieties as King Edward, Goldfinder, Sensation, &c., with Lord North of Banbury a good second.

The whole of the single dish classes were well filled with some splendid examples. Unfortunately, owing to lack of space, we are unable to enumerate the winners.

Messrs. Barr and Sons, King Street, Covent Garden, displayed a magnificent collection of vegetables, comprising some eighty dishes, prominent among them being Brazilian Beet, Capsicums, Red Cabbage, Celery (pink and white), Barr's White Champion being exceptionally fine; Potatoes in many varieties, Onions, Timmy Golden Nugget, Beans, Peas, &c. The whole were exceptionally well staged. Silver-gilt medal.

The Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett), also staged a beautiful collection, most artistically arranged, all, as usual, up to the high standard of perfection. It comprised about ninety dishes, including Lettuce, Butter Beans, Kohl Rabi, Radishes, New Zealand Spinach, Globe Artichokes and many other varieties. Large gold medal.

Messrs. Sutton and Sons quite excelled themselves in their highly attractive and well-arranged exhibit of vegetables, intermingled with bright colours of Asters, Antirrhinums, Begonias and various annuals. A capital selection of Melons was dispersed throughout the collection. Large gold medal.

Messrs. Webb, Wordsley, Stourbridge, had an exquisite collection of flowers, vegetables and Melons. The Onions, Carrots and Tomatoes were in the best of condition, and arches of Carnations and Sweet Peas gave a suitable setting to this admirable collection. Large gold medal.

Messrs. Dickson and Robinson, Manchester, staged a most glorious display of Lilliums, viz., *L. auratum*, *L.*

Melpomene and *L. longiflorum grandiflorum*, also Carnations in variety, with a superb collection of Peas, Melons and Tomatoes in the foreground. Gold medal.

The society's large gold medal was awarded to Messrs. Clibrans for a magnificent display of flowers, fruit and vegetables of the highest excellence.

HARDY PLANTS.

Herbaceous plants were well represented, although in some instances the flowers were unmistakably weather-beaten. Phloxes were not quite so good as we have seen them on previous occasions, but late-flowering Gladioli, Pentstemons and Gaillardias were all three worthy of special mention. With the exception of new Montbretias, there was a decided lack of outstanding novelties among herbaceous plants. There was splendid competition in Class 5 for a group of hardy and perennial plants with a background of Bamboos, &c., with a pool of water, Nymphaeas and other water plants. The premier place in this class fell to the lot of Messrs. Gunn and Sons, Olton, with a most beautiful show of hardy flowers, such as Hollyhocks, Phloxes, Spiraeas and Lilliums. In the foreground was a little water garden containing many flowers of Nymphaeas in a variety of colours. Second, Mr. J. E. Knight, Wolverhampton; third, Mr. T. R. Hayes, Keswick; fourth, Messrs. W. Artindale and Son, Sheffield. Mr. T. R. Hayes was first for a collection of rock and alpine plants with a very effective exhibit, occupying 100 square feet, arranged upon the ground. Mr. R. Hayes, Grasmere, and Messrs. W. Artindale and Son were the runners-up in this interesting class.

A raised water garden, surrounded by Delphiniums, Lilliums and a host of water-side plants, was erected by Mr. Amos Perry, Enfield, Middlesex. The arrangement left nothing to be desired, the colour combination and grouping being most pleasing. A large gold medal was awarded for this admirable group.

A gold medal was awarded to Messrs. Gunn and Sons, Olton, who put up an extensive group of Phloxes, including all the varieties that are worth growing.

Baker's, Wolverhampton, staged a most effective group of alpine and herbaceous flowers, for which a gold medal was awarded. Phloxes, Delphiniums, Senecio clyorum, Dahlias and early-flowering Chrysanthemums were alike equally well shown.

Messrs. Dicksons, Royal Nurseries, Chester, were represented by a grand collection of herbaceous plants, in which Gladioli and the lovely Californian Tree Poppy (*Romneya Coulteri*) figured prominently. A silver-gilt medal was awarded for this exhibit.

A similar award was made for Pentstemons, Phloxes and Antirrhinums shown by Mr. Forbes of Hawick, which aroused the admiration of all visitors. The little-known hardy plant, *Encemis punctata*, was included in this group.

Messrs. Isaac House and Son, Westbury-on-Trym, Bristol, had an interesting collection of hardy alpinics, in which Campanulas were most conspicuous. The same firm had a well-arranged group of herbaceous flowers. Phloxes were a feature in this group, for which the high award of a gold medal was given.

A wonderful display of Montbretias, including the latest creation, *Star of the East* (illustrated on page 437), was shown by Messrs. Wallace and Co., Colchester. A silver-gilt medal was awarded.

A gold medal was awarded to Messrs. Jarman and Co., Chard, for a comprehensive group comprising Pelargoniums, Roses, Dahlias and their speciality, the new Centaureas.

Mr. A. W. Thorpe, Lichfield, had a grand collection of early-flowering Chrysanthemums, for which a silver-gilt medal was deservedly given.

A similar award was made to Messrs. Pritchard and Sons, Shrewsbury, who staged alpinics, chiefly Campanulas, in pots and ornamental bowls, and Ferns.

Messrs. Harkness and Sons, Bedale, Yorks, sent a wonderful collection of Gaillardias in warm orange tones of colour. The variety Mrs. Mackellar is remarkable for its very large flowers.

Messrs. G. Gibson and Co., Leeming Bar, Bedale, Yorks, had a capital bank of herbaceous flowers and Roses. The magnificent scarlet *Lobelia Gloire de St. Amnes* was shown in this group.

Messrs. Caldwell and Sons, Knutsford, showed Phloxes and the general run of herbaceous plants in good form, but somewhat overcrowded.

Mr. Robert Hayes, Grasmere, showed a nice lot of Phloxes from Wordsworth's country, the heart of English Lakeland.

An admirable exhibit of late-flowering Gladioli was shown by Messrs. Hogg and Robertson, Dublin.

Hollyhocks in tall, handsome spikes of varying hues were shown by Messrs. Webb and Brand, Saffron Walden, Essex.

Mr. R. Pritchard, Wimborne, had an interesting lot of alpinics, among which we observed *Antirrhinum glutinosum* and the charming *Bluebell Flower*, *Waldenbergia gentianoides*.

Messrs. Conways, Limited, Halifax, showed a representative collection of herbaceous flowers interspersed with pillars of Roses.

Mr. J. H. Marsden, Malvern Link, showed early-flowering Chrysanthemums and herbaceous plants.

Messrs. F. Smith and Co., Woodbridge, staged herbaceous plants in great profusion.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Our Special Bulb Number.—Now that the season for planting bulbs is once more with us, we shall devote the greater part of our next issue, which will be considerably enlarged, to articles on bulbs for autumn planting. The Rev. J. Jacob, Mr. C. E. Shea, Mr. H. R. Darlington, Mr. F. Herbert Chapman and other well-known growers of various kinds of bulbs will contribute to that issue, for which we anticipate a large demand. In addition to numerous and unique black-and-white illustrations, there will be a coloured plate of Cottage Tulips; but the price of this special enlarged number will, as usual, be one penny.

The National Vegetable Society's Show.—We would remind our readers that the annual exhibition in connection with the National Vegetable Society is to be held this year in the Clarendon Hall, Watford, on Wednesday, October 2. Nearly two hundred pounds in prizes is being offered, and there are classes suitable for both large and small growers. Entries close on the 23rd inst. Copies of the schedule and full particulars concerning the show can be obtained from the hon secretary, Mr. E. G. Quick, Kelmescott, Lockett Road, Wealdstone, Middlesex.

A Good White Phlox.—Now that so much interest is being taken in the herbaceous Phloxes, we ought not to lose sight of some of the older varieties, several of which are not yet surpassed. Among these is the white variety Mrs. E. H. Jenkins. We have had plants of this in flower for nearly seven weeks, and there is still a good sprinkling of blossoms. For its long period of flowering alone this Phlox is well worth growing. The blossoms are moderately large, pure white, and the flower-trusses have a good branching habit. It increases very rapidly, and is all that a good Phlox ought to be. It was raised some years ago by our esteemed contributor, Mr. E. H. Jenkins.

Importation of Potatoes to Jersey.—The Board of Agriculture and Fisheries desire to inform Potato growers and merchants that the States of the Island of Jersey have adopted an Act authorising the importation of Potatoes from the United Kingdom, as from the 17th ult., on the following conditions: Each consignment must be accompanied (a) by a declaration by the shipper indicating the farm where the Potatoes were grown and certifying that no case of wart disease of Potatoes has occurred on such farm; and (b) by a certificate of the Board of Agriculture and Fisheries, the Board of Agriculture for Scotland, or the Department of Agriculture and Technical Instruction for Ireland, as the case may be, to the effect that no case of the said disease has occurred within five miles of the farm where the Potatoes were grown. Intending exporters of Potatoes to Jersey should forward the declaration from the grower of the

Potatoes previously referred to when applying to the Board for a certificate. The declaration should state the name of the farm on which the Potatoes were grown, the parish in which it is situate and the nearest post town, in order that its exact position may be readily identified.

National Rose Society's Autumn Show.—The annual autumn exhibition in connection with the above society is to be held in the Royal Horticultural Hall, Vincent Square, Westminster, on the 12th inst. In a wet season such as the present it will be particularly interesting to see which Roses are the most satisfactory. Wonderful strides have been made in autumn-flowering Roses during recent years, and there is certain to be a good display.

A Good Hardy Crinum.—In every garden where the Crinum can be accommodated, whether with sheltering wall, greenhouse or fence, if not capable of standing in the open border, the typical *C. Powellii* is worthy of attention for the warmth of its colouring at this season. The rosy red flowers, even if small by comparison with other varieties, are certainly of the decorative order, and, deepening with age, are very attractive in the early autumn.

Sweet Peas Diseased.—At a meeting of the scientific committee of the Royal Horticultural Society held on the 27th ult., Sweet Pea plants from Mr. Dipnall were shown. The specimens were damaged by the "streak" disease, *Thielavia basicola*. Many of the leaves and parts of the stem had also patches of *Botrytis cinerea* growing on them. The roots were poorly developed, and showed signs of some check earlier in the season, probably overwatering in the early summer. As a method of preventing the attack, the deep and early autumn cultivation of the ground intended for next season's crop of Sweet Peas, a very moderate use of organic manure, thin seeding, and the frequent use of the Dutch hoe in place of watering during early droughts are suggested.

Growing Camellias in Decayed Wood.—In the current issue of the *Kew Bulletin* Mr. W. J. Bean, in describing a visit to various gardens in and around Florence, gives the following interesting note about Anthuriums and Camellias: "A visit was made to the School of Horticulture at Cascine on the outskirts of Florence. An interesting branch of activity here is the hybridisation and improvement of Anthuriums, especially of the red-spined section. A group showing some of the best results secured a first prize at the recent International Show at Chelsea. Another interesting culture is that of Camellias in the decomposed wood of *Castanea sativa* (the Sweet Chestnut). This material, regarded here as a substitute for peat, is the brown, fungus-killed wood one sees in hollow trees, and Camellias, which will not grow in the ordinary soil, thrive well in it. *Acacia dealbata* also fails in the ordinary soil and is grafted on *A. longifolia*, which succeeds in it."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Hardy Pelargonium.—In THE GARDEN for August 31, page 433, Pelargonium endlicherianum is noted as being the only species possessing any claim to hardiness. Perhaps some of your readers would be interested to know that *P. triste*, although not so showy, will survive our winters at the foot of a warm wall. I saw the species a fortnight ago in the Cambridge Botanic Garden growing by a greenhouse wall, where I know it has existed for at least ten years. It was then carrying two spikes of its curiously-marked, brownish yellow flowers well above the pretty lacinated foliage. Like *P. endlicherianum*, it dies down to the ground each winter.—E. J. ALIARD

Roses with Bad Habits.—I am more than astonished to note on page 422 "H. P." denouncing that grand garden Rose General Macarthur as being subject to mildew. We have only had it for two seasons, but each of these has been so entirely different from the other that no better test could be devised for proving the habit of a Rose. Last year it was practically free from this troublesome disease, while up to the present (August 27) not the slightest sign of mildew is to be seen this year, while some other varieties are rather badly touched. Only the other day a gentleman visiting here remarked that this Rose was worth cultivating for its foliage alone. Is not "H. P." confounding General Macarthur with some other variety?—C. B., *Linthgow*.

Clarkias and Godetias.—In "Notes of the Week," issue August 24, the references to these plants are interesting and instructive. The Clarkia is becoming a very popular annual, both for filling borders and in a cut state for vases, the tall varieties producing fine spikes of blossoms peculiarly adapted for placing in the tall vases now so extensively used. During the present summer I have noticed that Clarkias have been very effectively used in dinner-table competitions at some of our shows. I first saw a table so decorated about four years ago, and was much pleased with the effect. The deep and light pink, purple, salmon, rose and white varieties are very charming. The Godetias are equally beautiful, and should certainly be freely used in a cut state, as the flowers last so long in vases. I was not aware, before reading the note referred to, that they would last such a long time in a fresh condition.—SHAMROCK.

Puschkinias, Snowdrops and Winter Crocuses. I was glad to find from the note on Puschkinias, page 421, issue August 14, that I am not the only ignorant amateur who till recently was unacquainted with these fascinating little flowers. I got a few last autumn and (being a genuine "amateur") planted them in a small wooden box for fear I might waste one of my few precious bulb bowls on something unsatisfactory. However, as soon as the first spike of bloom opened, I armed myself with a (kitchen) fork and promptly transplanted them into a blue and white china bowl. The accommodating little bulbs bore "the move" without flinching, and, what is more, continued to flourish for quite a long time in the window of a room lighted by gas! This year my bulb-merchant has an order for a hundred, which I intend to put in little open lattice-work blue and white Japanese Fern pots, and I hope to have some very dainty specimens on the flower table in my "pleasant parlour" in the early spring. I can

endorse Mr. Bowles' advice to plant Snowdrops early (just like *Lilium candidum*); in fact, I lifted and replanted mine in June before their foliage had quite faded away, with the happy result—after the failures of many years—that I can now proudly say I have enough for my small garden, in the shape of a border about twenty feet long by over two feet wide, entirely filled with Snowdrops (increased from about two hundred planted eight years ago). I am surprised Mr. Bowles omitted *Crocus Imperati* from his list (most of which I have tried), for, so far as my pocket has permitted me to experiment, it is much the best of all, and can be relied on to furnish some pretty bowls for the table by Christmas-time without any artificial heat. It also flowers freely and continues long in bloom in a room, a great consideration with—"ANNE" AMATEUR.

Judges Judged.—The recent correspondence in THE GARDEN on this subject has been interesting and, I think, instructive in many ways, but more particularly perhaps as demonstrating the importance attached by the writers to a strict adherence to the letter and spirit of the rules laid down in the schedule for the information and guidance of exhibitors and judges alike. There are still one or two points on which a slight difference of opinion exists among judges. One of these, and I think the principal one, was incidentally mentioned in Mr. Hudson's letter on the subject in your issue of last week. I refer to the subject of disqualification. It is always a delicate matter, and one which judges approach with reluctance and regret, because it is sure to cause disappointment, and even sometimes pain, to one or more of the exhibitors. Perhaps the most frequent cause of disqualification is the inclusion of too many (or too few) plants in a collection for which a distinct number of plants is asked for, or, in the case of fruit, in dishes of Peaches, Nectarines, Apples, Pears, &c., where six fruits are asked for and where seven or more are included. It is suggested that the better way of dealing with these mistakes is to request permission from the authorities of the show to draw the exhibitor's attention to this fact, in order to give him an opportunity of correcting the mistake. It is a stupid mistake to make, and one for which there can be no excuse, and I doubt very much if either the judges or the authorities have power legally to redress the mistake once the exhibit has been placed on the stage and out of the exhibitor's hands. Certainly if such an exhibit is awarded a prize, the prize-winner next below has, in my opinion, a valid reason for protesting against an award being given to an exhibit which had been so favoured by the judges. I am strengthened in this opinion by the fact pointed out in Mr. John Wright's letter—that it is quite competent for the judges to recommend to the authorities, in all cases where they are convinced that the error has been a genuine and accidental one, that an extra prize be awarded to the disqualified exhibit more or less equivalent to the prize lost in consequence of the error, so that the exhibitor is punished for the error but suffers little or no material loss. If this rule were rigidly carried out, there would be fewer mistakes of this sort in future.—O. T., V.M.H.

The Sporting of Californian-grown Sweet Peas.—I read with pleasure the article under this heading in the issue dated August 24, page 423, which is very timely. This season has given many growers cause for complaint in finding foreign stocks untrue, and I trust that our experts will come along and voice their views in the matter,

and thereby assist in trying to find the real cause of the trouble. It is interesting to hear that the mixed stocks are all Californian-grown. This certainly advances us one step, which should prove helpful in locating the cause. We must, however, try to probe the matter further, and to this end I contribute my observations. I have noticed that the cross-fertilisation theory is always advanced when this subject is discussed, and while it may to some extent actually happen, it would not explain all the mixtures that we get from Californian stocks. To cite a case in point, I have this season had a blue bicolor in Dainty Spencer, Etta Dyke and Mrs. Hallam, and an Elsie Herbert type in Etta Dyke and Asta Ohn. Now the seedsman, who is the grower, assures me they are sports, which seems truly remarkable, especially so when it is considered the same (sports?) appear in three and two cases respectively, and, it should be noted, in colours that are far apart. Despite the assurances that Californian stocks are as severely rogued as English, I think it must be admitted that the conditions under which the former are grown are not so favourable to true stocks as the English, although the seed is, generally speaking, better harvested and germinates excellently. The conditions referred to are the warm climate, which naturally forces the flowers out so quickly that they are over and seed-pods forming in a very short time, thereby giving little opportunity to the grower to get over his acres of plants with that regularity that is essential, especially so when the plants are on the ground. Further, quick ripening of seed means that some will fall before it can be gathered, and will come up next season. As we all realise that we cannot do without the foreign seed, we can only hope that something further will be done to ensure stocks being produced that will give a higher percentage of true flowers than they at present do.—GEORGE TUCKER.

— The great disappointment I have experienced in regard to some varieties I have grown this season leads me to think that probably some of the seed supplied to me—and that, too, by a firm of great repute in this country—must have been Californian-grown. This is the conclusion to which I am driven since reading the article in your issue of the 24th ult., page 423, or, rather, by the reading of that article together with knowledge gained from observations made during many years, added to what I noticed at the time about the seed purchased as stated and the behaviour of the plants since. The variety Clara Curtis, from ten seeds sown, gave one plant bearing maroon flowers similar to Othello, the other plants true; but Helen Lewis was far worse, showing no fewer than five poor varieties and only one plant bearing flowers nearly like the original, and so I might go on in regard to another half-dozen at least. I am one of those who "have bluntly stated that the stocks were mixed," and to that explanation I shall hold until some other has been clearly proved to apply to the case. No doubt there are among raisers and others those who, if they would, "could a tale unfold" upon this subject. In my opinion nothing short of an investigation on the spot, that is, in California itself, will be productive of real satisfaction to the disappointed growers and irritated merchants of this country. To carry out such a bold scheme, an expert should be chosen by one of our great societies, say, the Royal Horticultural Society or the National Sweet Pea Society, the funds being provided partly by those societies and partly by the great firms most affected—WILLIAM ROBIN, *Hawsham, Lincoln*.

A Graceful Shrub (Cercidiphyllum japonicum).

I am rather interested in the question of the hardiness of *Cercidiphyllum japonicum*, which, I am told, is not quite hardy. Young plants have stood the last two winters with me, and do not appear to have suffered at all. It is, however, one of the subjects which looks as if it would be easily injured in appearance by high winds, and a storm a month or so ago rather defaced one of my plants by knocking about the leaves. It is rather a graceful-looking shrub at present, and one would like to know of its hardiness. My plants are only about four feet high, but it is said to grow to 20 feet in its native country.—S. ARNOTT.

Three Crops of Pears in One Year.—It is a common occurrence the blossoming of a Pear or Apple tree late in the summer while fruits are at the same time coming to maturity on it. This year I have a Pear tree, Durondeau, trained as a cordon, bearing fruits set at different times—the first set on an ordinary spur, the second on young wood growing from a spur higher up, and the third formed on the leader, about four weeks intervening between the three lots of flowers. Undoubtedly it is all to be accounted for by the exceptionally hot summer of last year, which matured the wood and buds so thoroughly.—AVON.

Nelumbium Flowers at Christchurch.

I was greatly interested in the note on *Nelumbium speciosum* which appeared in THE GARDEN of August 10, page 397. I am enclosing a photograph of a plant of *Nelumbium speciosum* roseum growing in the aquatic-house in these gardens, which you may be able to reproduce in THE GARDEN. The leaves of our plant are quite 18 inches in diameter, and the flowers, which are of a beautiful rosy pink, average 10 inches in width, while the plant itself is nearly seven feet high and is growing in a tank 18 inches in depth. The *Nelumbium* seems to revel in a rooting medium composed chiefly of turfy loam and cow-manure. We succeeded last summer in flowering the variety album. This year the plant is not so robust, but is now making some good growths. I might mention that the temperature of the water in the tank during the growing season is maintained at a minimum of 70°, and a fresh supply of water is run in daily. Here also the blue *Nymphaea stellata* and several of its varieties do well, flowering profusely all through the summer.—JAMES MURRAY, *Sopley Park Gardens, Christchurch.*

FORTHCOMING EVENTS.

September 9.—National Chrysanthemum Society's Floral Committee Meeting at Carr's Restaurant, Strand. United Horticultural Benefit and Provident Society's Committee Meeting.

September 10.—Royal Horticultural Society's Exhibition at Vincent Square, Westminster. Lecture by Miss Troyte-Bullock on "Cape Pelargoniums" at three o'clock.

September 11.—East Anglian Horticultural Club's Meeting. Royal Caledonian Horticultural Society's Autumn Show (two days).

September 12.—National Rose Society's Autumn Show at Vincent Square.

September 14.—Galashiels Flower Show.

THE ROSE GARDEN.

ROSE CONRAD F. MEYER.

HAVING grown this useful town Rose from the very first, I think I can enlighten some of those who complain of its behaviour. It is so valuable under some conditions that I feel it is possible it may be unsatisfactory where Roses thrive without any very particular care, and so I will tell of the conditions where it thrives and flowers freely, and also of two or three cases where it is decidedly unsatisfactory.

In a town garden near the sea in Yorkshire, where ordinary Roses refuse to thrive, this hybrid of *rugosa* has proved quite invaluable, flowering each year more abundantly and giving also some



THE SACRED LOTUS (*NELUMBIUM SPECIOSUM*) IN THE GARDENS AT SOPLEY PARK, CHRISTCHURCH.

very bright flowers in the autumn. The soil is strong clay, the climate generally cool and the growths extremely vigorous, so that my aim has always been to ripen the long summer shoots and plump up the flowering eyes on the upper half of the shoots. As it happens, I always leave this garden in October, and so before I leave I always prune and train this Rose. From the month of August I suppress entirely those soft, strong young shoots that are so apt to start from the base of the year's shoots, and during the summer I cut out the shoots that flowered most freely in June at the point where the first strong growth has been made, keeping, of course, all vigorous growths. In October I deliberately prune and cut out all weak and ill-placed wood, and tie out all the best and longest new shoots, either to a railing or an espalier, and still more frequently tie down many vigorous shoots over *Olearia Haastii* bushes, when the next spring they cover that hardy seaside

evergreen with quantities of fine flowers. I notice that my big bushes flower more freely than other folk's, and I have, after six or seven years' close watching, come to the conclusion that this early thinning, pruning and tying out is a great factor in the making of flower-buds, as growth goes on so late in autumn in this Rose. Of course, it flowered better than ever this spring and early summer after last year's heat and drought, but with care in carrying out the details I have given, I am sure the amount of bloom is increased in all seasons.

As all the world knows, *rugosa* Roses thrive best in sandy and peaty soils, so I strongly recommended this Rose to those who garden in the smoky districts of Yorkshire and on the light soils so prevalent there. To my great surprise I have found that though the plants grow very vigorously, they do not flower well, and the foliage that is so splendid and weather-proof by the sea soon drops and is affected by spot, as your correspondents complain, so that it is of no value in those places, even with considerable care. One reason I think is that it suffers if its roots get thoroughly dry in summer, and so makes still more late autumn growth; but I am inclined to say that it flowers much the best in a clay soil that is well impregnated with lime—a very curious thing when one considers its parentage.

Before I finish this little article I should strongly recommend another *rugosa* hybrid to your readers, for I do not believe it is known as it deserves. It is M. Gravereaux's *Parfum de L'Hay*, a red-flowered Rose, extremely sweet, as its name implies, with superb foliage and growth, which sends up enormous shoots in the summer that are crowned in September with large panicles of flowers in profusion. The flowers in autumn are brilliant in colour, and will pass muster anywhere as good blooms of that best of Roses, General Jacqueminot. I shall never forget my surprise at its beauty last year, and even this year it promises to repeat it if the weather will permit; but these cold drenching rains and cloudy skies must in the long run try even so hardy and vigorous a Rose as *Parfum de L'Hay*.

I am reminded by foreign friends that the best stock for strong-growing Roses on light and sandy soils is the Japanese Rose, *Rosa rugosa*. As in the case of the Briar, young seedlings, which can be grafted or budded below the collar, are the best subjects for using as a stock; but to the amateur who probably has plenty of strong suckers springing up at some distance from his bushes of *rugosa*, he will find he can utilise them easily by pulling them up from the soil till a portion of the smooth underground stem is exposed. He can then bud on it, and, after the maiden has flowered in due course the next season, he can sever it and plant it where he chooses. The Dutch find this stock far the best in their light and sandy soils, and so I believe it would be of use in England, especially in smoky districts and on dry soils.

Scarborough.

E. H. WOODALL.

[At least one large firm of Rose nurserymen in this country uses the *rugosa* stock for standard Roses, and we understand that such plants do well in almost any soil and transplant very easily.—ED.]

ROSES IN TOWN GARDENS.

IN "Notes of the Week" for the issue dated August 24 (page 421) is a short paragraph *re* Roses in London. That Roses can be grown in London and its immediate suburbs has been proved over and over again by the beautiful boxes of exhibition blooms staged annually at the metropolitan exhibition of the National Rose Society. I have seen really first-rate Roses in the class for those grown within eight and also within six miles of Charing Cross, and I take it we may style such a radius as town. If a double and rather balled-in variety like Caroline Testout opens freely in Hyde Park during such a sunless and dripping season as the present

more especially as we now have such a good type of free growth and opening to be found in the varieties named and others with the same characteristics. Thoroughly examine your ground and make that right; then you may reasonably look for a fair measure of success. A. P.

ROSE ENTENTE CORDIALE.

ALTHOUGH this beautiful Hybrid Tea Rose has been in cultivation in this country for two or three years, little has, so far, been written about it, yet it is one of the best for garden decoration, and should, if cultivated for the purpose, give excellent flowers for exhibition. It is a moderately

flesh, pale pink to brightest purple, and pale primrose to rosy salmon. The leaves of the Peony are a most useful autumn foliage for decorating, often turning to a beautiful red and bronze shade. Yellow Narcissus bulbs dotted among the plants give a very charming effect in early spring. Pæonies can be planted now or within the next few months in rich deep soil, adding plenty of well-decayed horse or cow manure. In dry seasons, and as soon as the buds are formed in early spring, they must be well soaked continually with weak liquid manure. Being strong, robust-growing plants, they soon impoverish the soil. Plants that are well established should have a trench dug out around them, partly filling it with well-decayed manure and the surface space with soil, treading the whole very firmly. Other suitable plants for shady places are *Primula bulleyana*, *P. sikkimensis* and *P. japonica*, hardy *Spiræas* in variety, *Funkias*, *Primroses* and *Polyanthuses*, *Vincas* (*Periwinkle*) and hardy Ferns. J. L. E.

SEASONABLE NOTES ON CARNATIONS.

Rooted Layers.—By the present date all layers correctly cut and pegged down with proper care in mounds of specially-prepared soil will, provided they have had necessary attention subsequently, be excellently rooted, and the question of where they are to be wintered must have immediate consideration. Notwithstanding the fact that the Carnation is a hardy plant, there are certain circumstances and conditions which render it wise not wholly to rely on plants put out in beds and borders in September. For example, in low-lying damp gardens, where the soil is on the heavy side, it is more than likely that the winter losses among plants in the open will be serious, not because frost has injured them so much as because they could not withstand the effects of a combination of damp atmosphere and frost. Again, numbers of modern varieties, and more particularly so those of the beautiful yellow-ground section, have not as sound a constitution as the older varieties, and as many of these are on the expensive side to purchase, it is not wise to risk the whole of the stock in the garden. We are, therefore, forced to have recourse to potting a certain number for wintering in cold frames. It is, of course, necessary for every individual cultivator to decide on the merits of his own case what system he will choose; but the desirability of having some reserve, even when the general conditions are apparently favourable, must never be overlooked. Rather more trouble is necessarily involved, but this will not weigh heavily with the man who aspires to achieve the finest results.

The Soil in Beds.—Depth and friability are essential to success, and it is obviously of decided importance that enough food shall be present to carry the plants on through the following summer. Thus the digging—it really ought not to stop short of bastard-trenching—must be thoroughly accomplished, and a sufficient quantity of sweet manure must be mixed into the second spit to provide plentiful supplies of food next season. This is buried well down to avoid contact with the roots, which I consider to be most undesirable. In some instances, no doubt, the soil will contain enough lime; but in the majority of gardens this will not be the case, and the grower will be wise who decides to add some in the convenient form of crushed mortar or lime rubble. Where it is inconvenient or impossible to use any organic



AUTUMN BLOOMS OF ROSE ENTENTE CORDIALE, A BEAUTIFUL HYBRID TEA OF RECENT INTRODUCTION.

is proving, we can surely look forward to a better measure of success when making use of more suitable varieties, and my present object is to name a few of the best of these.

A free-flowering white (in addition to Fran Karl Druschki, which is so well known as to need no comments here) I would select is Molly Sharman Crawford. This Rose is a good grower, exceptionally free and persistent in blooming, and invariably opens well. For deep scarlets I would choose General Macarthur and Grüss an Teplitz. In addition to Caroline Testout, we find freely-opening pinks in Lady Ashtown and Killarney, while for deep yellows and orange shades few will expand more readily than the exquisitely-scented Mme. Ravary and Marquise de Sinety. Edu Meyer and Theresa Bevan are a couple of salmon yellows that are free in every way and open well. There are many others; indeed, quite a list could be made up of varieties I have seen staged in the two classes for London which have been well represented during many and varied seasons.

So long as one confines the selection to really good and free growers, keeping rather closely to those with few petals, there is no more reason why an ordinary garden should not produce fairly satisfactory Roses in and near to London as is the case with many other plants and trees. With less smoke and fog owing to the use of electricity when compared with a few decades ago, we should even have a better chance of success than before,

vigorous variety and flowers very freely, the large, beautifully-shaped blooms being produced separately on good stems. The colour of these is clear pale cream, and I see that most nursery descriptions state that the edges of the petals are tinted carmine, but this feature has not developed on my plants. The blooms are very fragrant, and this, with their beautiful form and purity, should secure for this Rose a very warm reception. The foliage is hard and good, and so far, despite the wet, I have seen no mildew on it. Good as Entente Cordiale was at the first or summer flowering, the second crop has been even better, and the illustration shows two blooms that were cut at the end of the third week in August. H.

THE FLOWER GARDEN.

NOBLE PLANTS FOR SHADY PLACES.

MOST gardens have shady places beneath trees or under walls where very little sun can penetrate. In these places Pæonies, with their most beautiful varied colours, and some with delicious fragrance, will grow luxuriantly. The flowers last much longer than if exposed to full sunshine, and it is very essential the plants should have moisture. Hybrids of recent introduction bear very large flowers, and include colours ranging from white to pale

mannes, the advisability of forking into the top spit a little concentrated fertiliser may well be considered; but the fact that it is just as easy, if it be not a trifle easier, to do more harm than good with it at this season of the year must not be overlooked. It is, however, improbable that anything other than advantage could accrue upon a mixture of superphosphate of lime and kainit in equal proportions at the rate of 3oz. to the square yard. Basic slag, very finely ground, has proved most beneficial in my own garden, the dressing to each square yard being 4oz. worked into the top spit.

Potting Plants.—The first thing of importance in this phase of Carnation culture is to prepare enough small pots. They must be perfectly clean, and the provision for drainage must be efficient. It is, of course, true that the amount of water demanded during the winter months will be small, but it is necessary to see that there can be no danger of the slightest stagnation, or failure is sure to ensue. Therefore have one good crock over the hole in the bottom of the pot, and put round it in such manner that the passage of water will be facilitated two or three other pieces, and cover with coarse moss or a little of the rougher parts of the compost which, it will be remembered, it was suggested should be mixed two or three weeks in advance of actual use. In potting, firmness is desirable, but ramming in with a potting-stick must be deprecated, as it prevents the satisfactory extension of the roots. The soil ought to be pleasantly moist when used, and it should be kept in that condition subsequently. F. R.

DAFFODIL NOTES.

SOME MODERATE-PRICED DAFFODILS FOR SHOWING.

(Continued from page 443.)

Division IX., Poeticus Varieties.—I have lately written some notes on these. Almost all of them need to be caught at the critical moment if they are to be staged flat without "buckling." One must, accordingly, have more varieties in proportion to pick from than would be wanted in other sections. This is the most important bit of advice that I can give to would-be exhibitors. The corollary is spread out what you have over as long a flowering-time as possible. My earliest is Chaucer (April 4, 1912), and my latest is the lovely pale green eyed Tom Hood. It opened this year on April 18, fourteen days after Chaucer. Here are a nice eighteen. The first six are the more expensive ones: Acme (all-red eye), Kingsley, Matthew Arnold, Tennyson, Ruskin, Timon, Cassandra, Homer, Horace, Virgil, Laureate, Minerva, Rudyard Kipling, Ibis, George Herbert, Oliver Goldsmith, Almira and Orange Ring. From these it should be possible to cut a good six in almost any year. When Kestrel, Socrates and Snow King become cheaper, they may be added.

Class X., Double Varieties.—Little need be said of these. The new ones are too dear and seldom, if ever, seen in competition. I wonder how many are sold at such high prices. Inglescombe, Argent, Dubloon, Sulphur Phoenix, Apricot Phoenix, "Red and Gold" and Volcano are among the best; but the last three are expensive. Each of them is beyond my "moderate."

Class XI., Various Species and Hybrids.—Much as I like some of the little gems that this division contains, and with all respect to

Mrs. Johnston of Biddeford, who offers a prize at the "Midland," I do not think they are the things to be shown in competition. To me they do not mix, as people say. A non-competitive little group would be charming and instructive, but not so if staged with "show" flowers. JOSEPH JACOB.

THE ROCK AND WATER GARDEN.

A BEAUTIFUL HAREBELL.

(*CAMPANULA HOSTII*.)

FEW hardy plants possess greater attractions than the Campanulas, from whose number we can choose many beautiful flowers either for the border or the rock garden. Some are excellent for either purpose, and among them none is better than *C. Hostii*, which may be called a glorified form of our common Harebell, with much larger and finer flowers of a deep purple, and a more sturdy plant in every way. This Harebell, figured in the accompanying illustration, is referred to by authorities as a variety of *C. rotundifolia*, but

growing well in ordinary soil, and in summer giving plenty of flowers for a long period, these lasting much longer in partial shade than in sun. S. ARNOTT.

THE BEST SAXIFRAGES AND HOW TO GROW THEM.

Just as the genus *Saxifraga* is by far the most important race of hardy alpine plants, so is it the most replete of species, to say nothing of that equally great following of varieties which, combined, go to make the task of the amateur or beginner a most difficult, if not an impossible, one in making a selection of the best. Nor is the task rendered the more easy by the majority of hardy plant dealers, who appear to regard their duty complete by affording descriptions of a most meagre kind and the price at which they are to be had. How confusing, not to say embarrassing, all this must be to the amateur need not be dwelt upon here, and in the circumstances no apology is offered for directing attention to some of the more distinct. By the "best *Saxifrages*" is intended those that with a little intelligence and care—following always the teachings of the instructor by the way—may be grown by all, whether the desire be in the

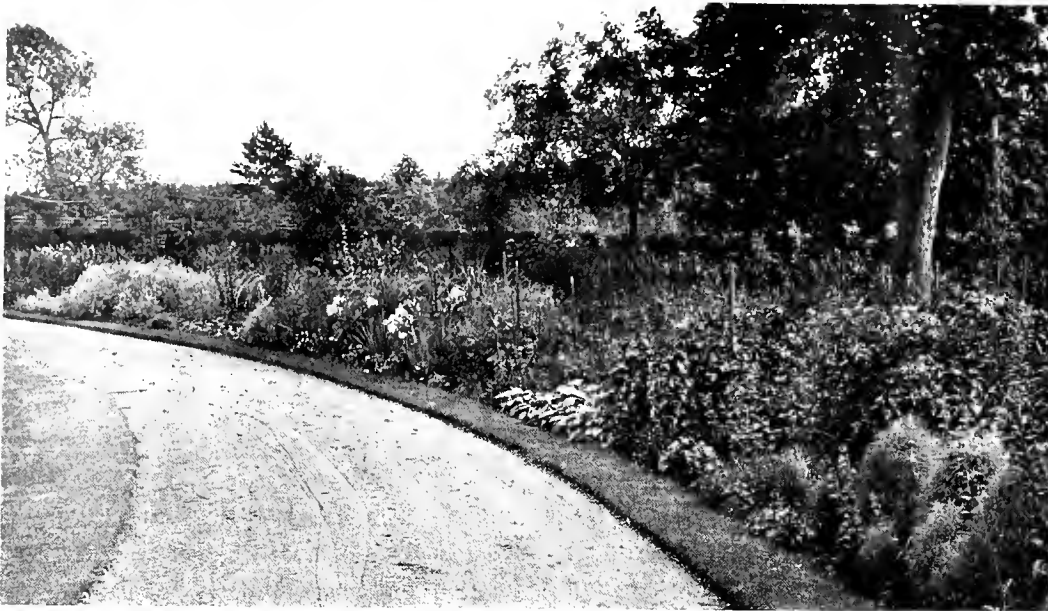


CAMPANULA HOSTII, A NEAR RELATIVE OF THE BRITISH HAREBELL AND A CHARMING PLANT FOR THE ROCK GARDEN.

is so distinct that it is difficult for the gardener to accept this reference. It is a much finer plant in every way, and one is glad to see from his book, "My Rock Garden," that Mr. Reginald Farrer, who knows these Bell-flowers so well, evidently agrees with the opinion that it is very distinct. It grows with me about a foot high, has a sturdy, firm, yet elegant habit of growth, and gives sheaves of handsome large purple bells. It evidently comes true from seeds, and can also be increased by division. It is an excellent rock garden or border plant, and is most obliging in its disposition,

direction of pot-grown examples for alpine-house or frame, for the rudest rockery bank of a couple of feet or so in height, or for the more elaborately-arranged rockery itself.

Regarded broadly, the genus divides itself quite naturally, for the most part, into two or three main groups or sections, of which the silvers or "encrusted" forms, the "mossies" and those bolder-leaved sorts which constitute the Megasea section are the most important. To render these notes of greater value, it is proposed to treat each section separately, and I take the encrusted section



THE "SUNSET" BORDER AT KENTFORD. THE FLOWERS ARE ARRANGED HERE TO REPRESENT THE COLOURS OF THE SETTING SUN.

first by reason of their beauty, their outstanding superiority and intrinsic worth. Culturally, it may be remarked of many of these that while they do not object to living upon the fat of the land—i.e., comparatively rich loamy soils—they incline to a greater or more pronounced silvery hue when grown in deep sandy loam to which old mortar or ceiling plaster—one of the best possible constituents of a Saxifraga soil—has been freely added.

Saxifraga Aizoon.—A good silvery kind and the type of an invaluable host flowering in May and June. All the varieties are of free growth, and as carpeters of the soil are most reliable. *S. A. rosularis*, white; *S. A. lutea*, palest primrose white; and *S. A. rosea* are the best. The last-named is a gem, whose rosy flowers on crimson peduncles or stems appeal to all. *S. A. balkana* is a delightful plant, the big whitish flowers being copiously spotted with pink. Any good loamy soil.

***S. apiculata*.**—A yellow-flowered kind of the freest growth and easiest culture in good sandy or even stony soil. The plant forms a cushion-like tuft, which from February to April is mantled with the clusters of blossoms on 3-inch-high stems. *S. a. Maylii* is a late-flowering form of this indispensable plant.

***S. burseriana major*.**—The prince of the white-flowered silvery Rock-foils. From a spiny grey tuft in February rise solitary stems bearing flowers of sparkling purity the size of a shilling. *S. b. Gloria*, *S. b. magna* and *S. b. speciosa* are other choice varieties of this set, valuable one and all to the cultivator of a select few because of their successional flowering. Deep, gritty loam and perfect drainage are required for all.

***S. cochlearis*.**—I look upon this as one of the most beautiful of a great race. It flowers in June, when the nearly foot-high panicles are a cloud of snowy pink-peppered blossoms. *S. c. major* is of larger growth in all its parts, while *S. c. minor*, also known in gardens as *S. valdensis* (though not the true plant), is a miniature of the first, whose elegant sprays of white please all-comers. This little tribe have a conspicuous beauty of their own even when not in flower.

S. rocheliana and its variety *coriophylla* are of the tufted set, and form cushions of growth, studded

with snowy flowers on 4-inch-high stems in April and May. These are most desirable and easily grown.

S. Cotyledon and its variety *S. C. pyramidalis*, whose giant white plumes are seen in many decorations, are indispensable to all. The natural flowering period is June and July, but the plant is forced in flower much earlier. *S. c. icelandica* is a variety 3 feet high, and appears in the last-named month as a fitting finale to a great race. Sandy or gritty loam.

S. erustata*, *S. cristata*, *S. pectinata and a rather numerous nearly-allied following known in nursery gardens are all neat-habited silvers flowering in May. They are highly attractive and white-flowered. Sandy or gritty soils.

S. Elizabethæ is not a silver, but a great beauty, producing a carpet of spiny grey-green leaves and big primrose yellow flowers in clusters on 4-inch-high stems in March and April. It is a most abundant bloomer, and grows freely in light, well-drained soils.

S. saneta is also a soil carpeter, and if freely grown, flowers well. On dry banks it becomes starved. The flowers and anthers are rich yellow and appear in March and April.

S. Hostii is one of the most valuable of the silvery kinds, a plant free in growth and readily increased. Its flowering sprays are 15 inches high. It is most effective in colonies, and flowers in April and May. Any good gritty loam.

S. kolenatiana is not unlike some of the Aizoon forms, but with flowers of rosy pink. It is a May-flowering kind and fond of chalk or limestone.



THE SUNK GARDEN AT REGAL LODGE, AS SEEN FROM THE LOGGIA.

S. lantoscana and its variety *S. l. superba* are in every way excellent silvers of the long-leaved set, and produce clustered racemes of white flowers on 6-inch-high stems in April and May. No selection, however small, would be complete without these. Gritty loam of good depth and free drainage.

S. lingulata.—A most valuable silvery kind, whose well-marked leaves and snow white flowers appeal to all. The flowers appear in May and June, and there is an elegant airy grace about the plant which marks it well. Botanically, this is the supposed type of the last-named, though in nursery collections they are kept distinct. It is an exceedingly beautiful Saxifrage.

modified *burseriana*, appear in February. The plant is happy in any light, sandy soil.

S. scardica obtusa.—A most valuable white February-flowering sort of about four inches in height. The plant is of quite easy culture, grows freely, after the manner of *S. rocheliana*, and is in every way desirable. Coming rather near this, but even earlier in flower, is one called *S. Kestonii*. It is valuable by reason of its time of flowering. *S. scardica* (true) is a rare plant, flowering in March or early April, and is quite distinct from the above.

S. Boydii is the queen of yellow-flowered Saxifragas and a rarity for the specialist. A well-grown plant is always a great attraction to those who love the Saxifragas. Two other yellow-flowered gems of nearly-allied parentage

THE GARDENS AT REGAL LODGE, KENTFORD.

FROM the time that one steps out upon the paved terrace until the survey of the entire garden has been completed, the visitor to Regal Lodge Gardens, Kentford, must feel that he is in an enchanted garden that has been designed in perfect taste and laid out with consummate skill. It is, in fact, an artist's garden, perfect in point of colour and grouping. Moreover, it is a garden possessing many features, each of which blends unconsciously into the next without undue formality or any leaning towards overcrowding.



THE PAVED GARDEN AT REGAL LODGE, WITH THE ITALIAN GARDEN IN THE BACKGROUND.

S. longifolia.—The great Pyrenean Rocktoil, whose huge, silvery grey rosettes of leaves spread out to 8 inches or 10 inches across. In any stage this species is unique. The panicles of flowers rise to 20 inches or 2 feet high, though seedlings may take years to flower. After flowering the typical kind dies, but a variety, *S. l. prolifera*, which produces offsets, is more permanent. The plumes are white, faintly spotted with pink. June and July flowering. Deep, gritty loam, preferably in rocky fissures or crevices.

S. Salomonii.—In the entire race there is not a greater beauty than this, though it is not free flowering. As a silvery grey carpeter of the soil it is unique. Its flowers, which are those of a

are Faldonside and Cherrytrees, and, given pot culture, are highly desirable.

S. Paulinæ is a yellow-flowered form 3 inches high, whose good growth and free flowering promise well. It is regarded as a possible rival to the above. February and March.

S. Boydii alba, if only 2 inches high, has glistening white flowers of great beauty in February. Splendid little plants of this are occasionally shown at the Royal Horticultural Society's spring shows, and always meet with a hearty reception. Gritty loam and pot culture. Next week I hope to deal with other members of this important race.

E. H. JENKINS.

(To be continued.)

Looking from the terrace towards the Italian garden, one obtains a good impression of the delicate colour tones obtained by careful planting. In the foreground is a sunk garden in shades of blue and silvery pink. A bed of blue Lavender is interspersed with pink Lilliums, surrounded by beds of standard and bush Roses and tubs of Hydrangeas, all in soft tones of pink. The low-growing plants between the chinks of paving-stones enter into perfect harmony, for these, too, are in shades of pink and blue, comprising Campanulas, Mossy Saxifragas, Sedums and Sea Pink or Thrift, while here and there a self-sown tuft of white Arabis has firmly established its right to be present. Throughout the garden flowers are grown a little

carelessly, yielding a harmonious blending of colour never to be found in a garden that is prim or too conventional.

As one wanders towards the Italian garden it needs no practised eye to tell that the garden has been designed with a view to making the best of the landscape. A small irregular clump of *Cupressus* guards the approach to the Italian garden, and within it is devoted to a veritable dell of Roses, in which the variety *Lady Godiva* is planted to form a bank on either side.

The Lavender Walk.—Perhaps the most charming feature in the late summer is the paved Lavender walk, a feature we hope to illustrate in a future issue of *THE GARDEN*. Bold lines of Lavender, edged with Thyme, are planted on either side of the walk, while between the paving-stones are innumerable patches of dwarf *Campanulas*, chiefly *C. pulla* and the variety *Miss Willmott*, with bells of silvery blue. The colour combinations of this walk in shades of blue are most pleasing.

It is in the artistic arrangement of the herbaceous borders that *Lady de Bathe*, who has designed the garden herself, is deserving of the highest praise. There is a long herbaceous border with a grass path leading from the Lavender walk to a little flight of steps in grass, whence one is conducted into a well-trained pleached alley of Lime trees. The flower-borders on either side of the grass path are chiefly planted in shades of blue, *Anchusa italica* Dropmore variety and countless numbers of *Delphiniums* being used most effectively. The borders and pathway are covered with arches of Roses. There is no straining after effect, but a careless beauty that compels one to admire as observed on all sides.

A "Sunset" Border.—Perhaps the most charming feature of all is a sunset border. It comprises herbaceous flowers so carefully planted as to produce those pleasing tones of colour seen in the glory of the setting sun. The effect, though novel, is a natural one, and *Lady de Bathe* is to be complimented on the result. The border is arranged in a sweeping curve on one side of a carriage drive. In the centre of the border are seen the warm orange tones and fiery reds produced by the free use of *Gaillardias*, *Monarda*, *Montbretias* and *Lobelia cardinalis*. The colour passes through to lighter shades created by such plants as *Pentstemons* and *Phloxes*, while beyond is the blue of the sky, obtained by *Campanulas* in varying heights, intermingled with *Eryngiums* and mauve-coloured *Phloxes*, passing on to cloud drifts that only *Gypsophila* and *Statiche elata* could produce. The effect is pleasing in the extreme, and only an artist could have conceived such a design.

There are other features in these gardens, such as a new rock garden already planted with many alpine, and associated with a little pool where *Water Plantains*, *Iris* and *Nymphaeas* are all freely grown.

We will bring these notes to a conclusion in referring to the loggia and sunk garden illustrated on page 450. From the loggia one looks upon a sunk garden. There is a Lily pool in the centre, where *Water Lilies* thrive and the stippled stems of *Scirpus lacustris zebrina* produce a good effect in the water. It is a paved garden, and little tufts of *Saxifrages*, *Thymes* and *Sea Pink* grow

between the stones. The beds in this garden are filled with *Roses* and *Lilies*, edged with the lovely mauve flowers of *Viola Maggie Mott*. Suspended baskets are filled with *Ivy-leaved Pelargoniums* and the silvery foliage of *Cineraria maritima*. Large earthenware vases are filled with the double-flowered *Marguerite*, while in the background are standard *Heliotropes* and large *Orange trees* in tubs, and pillars clothed with *Roses*.

THE GREENHOUSE.

THE CAPE COWSLIPS.

(*LACHENALIAS*.)

I would like to say a word in praise of *Lachenalias*. I grow a house 27 feet long by 9 feet wide full of them. I call them my February flowers, for (as I grow them with but little or no heat) they are in perfection then. As is the case with so many

brick red, and some of the *Lily of the Valley* scented species are a curious shade of pale blue. They are easy to grow, and require similar treatment to *Freesias*, but they must never have much heat. Early potting is the foundation of success. To fix a date I would say before September 20. Then give but little water until they are in growth.

After the flowers are over a gradual drying off should be given, followed by a period of rest from May till August. Then the cycle begins again. A good rich porous soil suits them very well. The flowers last a long time in a fresh condition, and they make delightful little pot plants. Six bulbs in a 5-inch or seven or eight in a 6-inch pot are useful sizes. For cutting for decorating the small round dinner-tables that are so fashionable they would, I think, be much appreciated arranged with nice greenery in low vases. They last as well cut as in pots. JOSEPH JACOB.

A BEAUTIFUL GREENHOUSE CAMELLIA.

THE large, red, *Pæony*-like flowers of *Camellia reticulata*, a native of China, make it one of the most gorgeous of spring-flowering greenhouse plants, and few people who see the large plant in the Temperate House at Kew in full blossom fail to appreciate its charm. The semi-double flowers are less formal in shape than those of the various varieties of *C. japonica*, the petals being larger and fewer in number. *C. reticulata* may be easily distinguished from *C. japonica* by its looser habit and longer, narrower, dull leaves. As a pot plant it is not such a success as when planted in a border, for it is apt to form a rather straggling specimen, and flowers are produced less freely than is the case when more generous border culture is available.

NOTES ON GARDEN DESIGN.

THERE are few features of a garden more capable of attractive treatment than garden pavilions. The whole theory of formal gardening is that the garden itself should bear a definite architectural relation to the house, which it encircles and adorns. It follows, therefore, that a garden-house or gazebo which is near the main building should partake of its character, should be, in fact, an outpost which the house throws out into the garden world. The further away it is placed, the less need there is to consider this relationship and the more liberty to the designer to adopt something in a rustic manner. It is rare, however, that a summer-house built of unshaped logs, whether barked or not, is successful as a design. Refinement is a quality as valuable in the garden as elsewhere. The accompanying illustration shows an admirable little house set in the corner of a wall garden at Petersfield and rising well above it. Mr. Inigo Triggs has designed it, so that the room is approached by an outside staircase from the far side of the wall, and the undercroft makes a convenient place for the storage of garden sundries. The treatment of the pavilion in brick and half timber is simple and effective. L. W.



A GARDEN HOUSE AT PETERSFIELD DESIGNED BY
MR. INIGO TRIGGS.

flowers with which one is not familiar, some will think most of them at first sight to be very much the same. So many of them are. These may well be left to the patient worker and specialist to enjoy. They can cull pleasure from the minute differences and improvements which others pass by unnoticed and uncared for. But I think those others may get a great deal of quiet enjoyment from some of the well-defined and distinct varieties, such as *pendula*, *Nelsonii*, *Cawston Gem*, *His Reverence* and *Ruth Lane*. Their popular English name, *Cape Cowslips*, suggests the prevailing colour, but here the resemblance ceases, for the little bells are not bunched up on the top of their stalks, but are arranged all round it like those of the Spanish Wood Hyacinth (*Scilla campanulata*). They are not, however, all of them yellow. *Pendula*, the Christmas-flowering *Lachenalia*, is a lovely

GARDENING FOR BEGINNERS.

HOW TO RAISE SWEET PEAS IN POTS.

SWEET PEA enthusiasts are placed in a similar position to cultivators of Chrysanthemums, as no sooner are the old plants cleared away than preparations must be made for raising a stock of young ones. Cultivators can, of course, raise plants from seeds sown in spring, and very satisfactory results follow when this is done. Many growers, however, prefer to raise the earliest stock towards the end of September in pots, and to put out the resultant plants in favourable weather in March or April of the following year. Certainly every lover of the popular Sweet Pea should raise some plants in pots if he possesses soil of a heavy nature, as it is a great advantage to be able to put out strong plants in such a rooting medium in spring.

The Potting Soil.—This must be quite free from wireworm or other insect pests, and be of moderate richness. Good loam of a fibrous nature which has been cut and stacked about two months should form the bulk. One peck of sweet leaf-soil to a bushel of the above and a small quantity of old manure placed in the bottom of the pots will do nicely. If the loam is of a sandy nature, sand need not be added to it; but if rather heavy, it must be mixed with the compost in sufficient quantity to render all quite porous. Use clean pots (3-inch) and select those that are deep.

Preparing Pots and Sowing Seeds.—Fig. 1: A shows how to place the clean crocks and a little rough compost and rotted manure in a pot; B depicts the space for the compost. C shows the seed buried a little more than an inch below the surface, and D the filled pots placed in an ordinary cold frame on a bed of ashes. If such frames are extra deep, put up a temporary stage on empty inverted flower-pots as shown at E. The soil when used must be in a medium state of moisture and pressed down moderately firmly. Give water

at once, but afterwards be very careful not to over-water, though it is absolutely necessary to good germination of the seeds that the soil be maintained in a consistent state of moisture. F shows a well-cared-for seedling growing freely; G depicts one that has been neglected, germinating weakly in soil that has been kept too dry. Of course, more seeds may be sown in larger pots, but it is better to confine one plant to a small pot. Fig. 2: H shows a weakly plant. Such plants may be strengthened by cutting them down as shown at I, as a young basal growth will take its place as shown at J. A well-balanced young plant is shown at K, and L depicts a plant with all the soil washed from its roots in readiness for transplanting in the flowering quarters in spring.

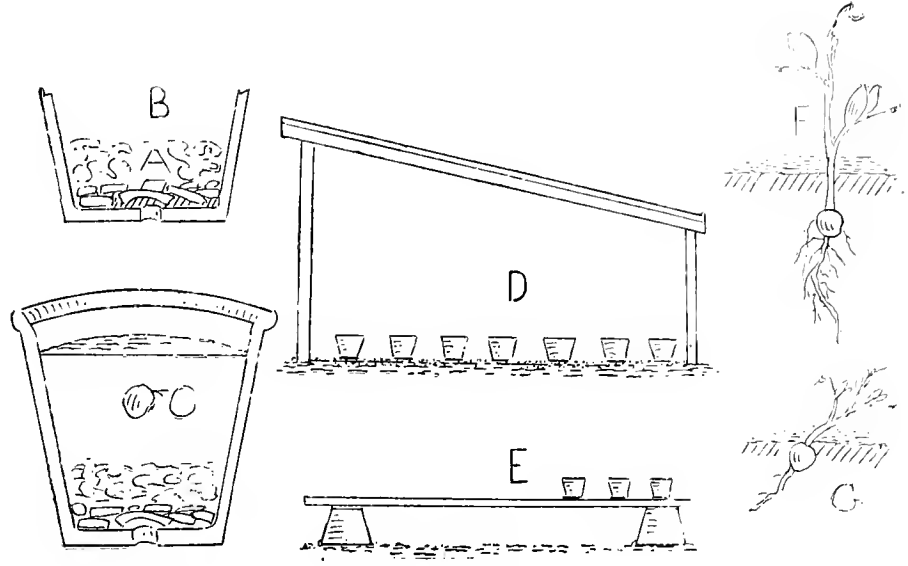
It is not absolutely necessary to wash away the soil, though many cultivators do this with much success. The plants may be put out with soil attached to the roots as grown in the pots. When planted, each specimen should be about nine inches apart every way in a zigzag line as shown at M.

Winter Treatment.—Sweet Pea plants must never be forced. Keep them cool, but safe from exposure to frost. The latter will not kill them, but it will sadly cripple and check the growth. Admit air in abundance when the weather is fine, and prevent the surface of the soil turning green by frequently stirring it. Do not overcrowd the plants, and maintain them in a clean, sweet condition, neatly staking any that require support. Feeding in pots is unnecessary. G. G.

LONDON PRIDE.

(SAXIFRAGA UMBROSA.)

It is often a very difficult matter to provide plants that will thrive in light and also heavy clayey soils in partially-shaded borders, especially in town gardens. London Pride will thrive in almost any ordinary garden soil, its foliage is ornamental, and the flower-spikes are freely produced and look very beautiful in vases. In borders where the soil is fairly rich under the shade of trees, the flower-stems grow 18 inches high and spread out in proportion. Such are grand for cutting. As edging plants to shaded borders or those in the open these plants are sure to succeed. Grown in clumps on rockeries they look charming. Every year the clumps and edgings spread considerably, though there is no difficulty in keeping the plants within proper bounds. There are now plenty of small side growths, and in some instances they have already rooted into the soil. Advantage should be taken of this to remove the side growths in question, and to transplant them either in a nursery bed or in their permanent positions. So treated they will get well established before the winter comes. SHAMROCK.



I.—SHOWING HOW TO PREPARE THE POTS AND SOW THE SEEDS.



2.—GOOD AND BAD SEEDLINGS. WEAK PLANTS MAY BE CUT DOWN AS SHOWN AT I.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.
The Flower Garden.

Annuals.—Where the custom of sowing seed of the many annuals for flowering early next season is practised, the present is a good time for doing so, as then the plants will attain a good size for wintering well and will give a fine effect long before those sown early in the spring of the year. The best plan is to sow in rows and thin to prevent overcrowding; then transplant to their permanent quarters. *Eschscholtzias*, *Nigellas*, *Corntowers*, *Godetias*, *Nemophilas*, *Collinsia bicolor*, *Erysimums* and *Poppies* are a few subjects that will fill many a gap with a bright display, and vacant places in the borders when cleared may be planted with these subjects.

Bulbs.—As soon as the work of planting can be put in hand after the receipt of the bulbs the better, whether they are to be grown in the garden proper or planted for natural effects under trees or in the many parts of the pleasure grounds. Where they are grown in the garden, whether for the supply of cut flowers or no, the ground should be well worked, and the addition of some well-decayed farmyard manure and road scrapings, if the soil is heavy, will prove an advantage. In narrow borders devoted entirely to them they look splendid when in flower if planted in lines, varying the distance between the rows according to the size of the bulbs, the same governing the depth of planting. For naturalising, the addition of a little new soil will generally prove an advantage except on very fertile land, and planting may be carried out by means of a bar or spade. This work is well worth a little extra trouble, as, all being well, the effect will be noted for years.

Plants Under Glass.

Arum Lilies.—These have had a good rest now, and those that were planted out are particularly in need of potting; but unless an increase of stock is required, I prefer to rest them in their pots. If these were potted anew last year and carefully attended to, little else will be required other than a good top-dressing after having taken off as much as possible of the surface soil without doing injury to the roots. See also that the drainage is good. For potting they like a compost of good fibrous loam, not too small, leaf-mould and the addition of some bone-meal and cow-manure, with a liberal amount of coarse sand.

Ferns.—Now that these have completed their season's growth and the power of the sun's rays is waning, less shade will be necessary, and this will also make the plants much more suited to room decoration. The plants will take abundance of water, especially on hot days, and plenty of humidity should be maintained by frequently damping between the pots and the floors of the house. A little soot-water, properly diluted, will be found a good stimulant. Ferns in hanging baskets will benefit by being immersed in a pail or tank of water.

Gloxinias.—As the flowering discontinues, the amount of water should be gradually withheld from the plants, so that the drying off of the foliage takes place gradually; and to assist in the maturation the plants may be removed to a more airy position, such as a shelf in quite a cool structure. When thoroughly ripened, turn the pots on their sides and winter in a warm house, or knock out the bulbs and store them in Cocoanut fibre.

The Vegetable Garden.

Potatoes.—The lifting of the main crop will be needing attention, and, in such a season as we have experienced, the sooner this can be accomplished the better. As soon as the haulm is matured I would recommend cutting it off and removing it to the fire as a means of preventing the spreading of the disease. If possible, choose a dry day for lifting the crop. The closest watch should be kept for any tubers that show the slightest trace of disease, and the latter kept apart; also small tubers, the best of which may be selected for seed next year and placed thinly in a cool shed from which frost can be excluded. Where a quantity of edible tubers have to be stored, and there is not sufficient cold-shed accommodation, these are best placed in pits, having the base slightly above the natural level on a good layer of straw, and as

the ridge of tubers is built up, scatter a light dusting of newly-slaked lime between them.

Celery.—The weather has suited this crop remarkably well. The earliest plantings will need further papering or earthing-up, whichever practice is in vogue. Later plantings must be kept free from weeds and bad leaves, side growths removed, and a loose tie of raffia will keep the leaves intact.

Spinach.—Make another sowing of Long Standing or other approved variety for winter and spring supply. So much depends upon the weather as to the ultimate value of this vegetable; but where space permits, make one or two further sowings. Have the seed-bed level and brought down to a fine tilth, and a surface-dressing of soot and wood-ashes will be found of distinct benefit.

Fruits Under Glass.

Late Grapes.—The recent dull weather has necessitated the use of a little fire-heat to assist in the colouring and ripening of late Grapes, and though the weather has been dull, damping of the floors and borders will have been necessary, with as free a ventilation as possible; otherwise the foliage will be very susceptible to red spider. Do not be too severe in thinning the growths except with white Grapes, which need plenty of light to bring up their colour.

Young Vines.—It is highly important that the growth be thoroughly ripened of young canes; these are oftentimes apt to be over-vigorous and want to continue growth. A little warmth in the pipes and abundant ventilation whenever possible by day and night, with slightly drier conditions in the house, will help to obtain the desired results.

The Hardy Fruit Garden.

Cleansing of the Trees.—As the fruits are gathered should be proceeded with, and especially wall trees, which the rains have hardly touched, and the same applies to watering. Trees that have carried good crops ought not to be neglected, but rather be given the benefits of good soakings of farmyard manure, especially trained trees on walls.

The Shrubberies.

Hydrangea paniculata.—This is a good subject for flowering during the end of August and early September, and those who do not possess this plant would do well to note and plant it if a free-flowering subject is wanted at this season. The old inflorescences may be allowed to remain, and the shoots cut back before growth commences next spring. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Propagating.—Cuttings of *Calceolaria amplexicaulis* should be taken now, so that they may be rooted before winter sets in. Short pieces root more readily than long ones, and it contributes considerably to a satisfactory "strike" to never let them flag. Abutilon cuttings also should be taken. These should be placed in a cool stove, in which they root well enough. Fuchsia cuttings, too, should be inserted in boxes and placed in a cold frame, or, better still, in a manure-heated frame. Choose soft tips, which not only root better, but grow better than hard pieces.

Kochia triophylla.—Well-grown plants which are changing colour may be planted in beds of suitable colours. They provide a change for the next six or seven weeks with little trouble. The plants should be turned out of their pots and the balls sunk deeply in the ground, so that the roots can be moistened two or three times weekly.

Single Hollyhocks.—Seeds will be ready to gather on old plants, which are the only ones that have been really satisfactory this year. Sow at once thinly in cutting-boxes and stand them in a moderate heat to ensure rapid germination. With ordinary attention to potting as required, the plants will be large enough to plant out in April or the beginning of May. Double Hollyhocks, both old ones and yearlings, are true autumnal flowers this year. Of hundreds, none will be flowering till about this date.

Pinks.—Mrs. Sinkins and others of the free-growing section may now be lifted and pulled to

pieces, planting them singly where they are to flower next year. Usually at this date the under part of the shoots is alive with young roots, which facilitate their establishment. Sweet Williams may be treated in the same way, especially the double dwarf crimson variety. If beds of the florists' section have not yet been planted, delay doing so no longer.

The Plant-Houses.

Primula obconica.—Some of the more forward plants may be placed in a warm pit to hasten flowering should they be required for decoration in October or November. A slight surface-dressing of manure will deepen the green of the leaves, which in the improved modern section are too handsome to be overlooked. It, moreover, adds depth and brilliancy to the colour of the flowers; but these stand quite three weeks, pink and deep rose being lovely in low vases.

Room Plants.—Now that fires are once again constantly on, dust will be an appreciable foe to the inside man, who usually gives himself much labour trying to wash it off the foliage of such plants as *Aspidistras*, *Aralias* and *India-rubber Plants*, not to mention the finer type of *Dracenas* and such like. Nothing excels a cloth for dusting. If used wet, the moisture should be wrung out of it, and, as it becomes dirty, rinsed in hot water and again wrung. But a dry cloth often used is best.

The Hardy Fruit Garden.

Blackberries.—This year's shoots of the Parsley-leaved variety should be placed out of the way of the fruiting shoots to permit of the fruit being gathered. Any weak shoots that obviously will not be required for another year should be cut clean out. The Japanese Wineberry is ripening, and, where birds abound, it will be essential to protect the bushes with herring-nets.

Raspberries.—These have continued fruiting for a long time, but are now over, and the bearing shoots should be cut out at once, also any weak ones that are not required, slinging up those that remain and not shortening them meanwhile.

Black Currants.—Boskoop Giant has failed so consistently that I have destroyed it, and am now substituting *Victoria*. The plants are quite ready to replace it, and will probably be planted before these notes appear, this fruit being one of the few that can safely be planted early in autumn. Carter's is perhaps as desirable a variety as *Victoria*.

The Vegetable Garden.

Cabbages.—The main batch will be quite ready to plant out in the course of next week. The plants need not be set wider than 12 inches in the rows and the latter 18 inches apart, the extra plants, should a portion be left to grow again after cutting, being drawn when ready. Those who leave the plants standing too long in the seed-bed may rest assured that the loss in earliness is very considerable, as may be proved by planting another batch a fortnight after these.

Scotch Kale.—This hardy vegetable is so useful in late spring when vegetables are scarce that spare ground may be planted closely with the surplus material still in the seed-bed. The plants will grow very little till spring, when a surface-dressing of a stimulating manure will cause them to produce nice tender leaves. The earlier batch will be ready to have some earth drawn up to the stems.

Late Peas.—Should mildew be apparent, dust the plants as completely as possible with flowers of sulphur, which must be renewed from time to time; or they may be sprayed with a fungicide, which, where there are many grown, is a laborious proceeding, and must also be repeated to be effective. If, owing to the continued wet, podding is tardy, the tops of the haulm may be cut off, which will hasten production.

Cauliflowers.—It is the custom of many gardeners to sow *Early London* or *Erfurt* at this season, choosing a spot on a warm border for the seed-bed, and later transplanting the seedlings closely together near to the base of a wall with a south aspect. The plants make practically no growth all the winter, and are again transplanted, when spring gives a new impulse to vegetation. Very fine early Cauliflowers are procured by setting five plants under an ordinary four-square hand-glass, the present time being also suitable to sow seeds for that purpose.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

NEW AND RARE PLANTS.

Cofoneaster divaricata.—This is a recent introduction from China of irregular, sub-erect habit of growth. The species bears the impress of freedom and vigour, and for bold grouping should prove most effective. The oval-shaped fruits are coloured a rich scarlet. From the Hon. Vicary Gibbs, Aldenham House, Elstree. First-class certificate.

Each of the following received an award of merit :
Dahlia Princess Louise (Collarette).—The florets are coloured an intense crimson; the small inner florets are white. The form is excellent. From Messrs. Dobbie and Co., Edinburgh.

Dahlia Antwerpia (Collarette).—A good scarlet with yellow base and yellow disc florets. From Mr. J. B. Riding, Chingford.

Dahlia Edith Carter (Cactus).—A most attractive flower from any point of view. The flower gives the impression of a rich golden yellow whose florets to half their depth had been dipped in a reddish crimson colour. It is very showy. From Mr. H. Shoemith, Woking.

Dahlia Pegasus (Cactus).—A fancy variety whose rosy-coloured florets are touched with crimson. From Messrs. J. Stredwick and Sons, St. Leonards.

Dahlia Leopold (Single).—A fine rich crimson with golden disc.

Dahlia Marion (Single).—Rose and fawn, suffused yellow, and slight crimson zone at the base of the florets.

Dahlia Irene (Pompon).—The colour is rosy lilac, the form a model of its kind. These three were exhibited by Messrs. J. Cheal and Sons, Crawley.

The whole of the Dahlias above-named, having been adjudicated upon by a joint committee of the National Dahlia Society and the Royal Horticultural Society, carry the first-class certificate of the former and the award of merit of the latter.

Odontoglossum Helene.—An unusually dark-flowered variety of good form. Sepals and petals of reddish chocolate, suffused and veined with white. The lip is also white.

Lælio-Cattleya amabilis Borlases Variety.—The white sepals are long and narrow, the petals broad, white suffused delicate pink, lip crimson-purple, with yellow in the tube. A handsome variety.

Odontioda Euterpe.—A variety of remarkable beauty, distinction and rich colouring. Viewing the flower from behind and looking towards the light, a rich reddish wine colour is seen, while from the front a clouded vinous crimson is presented to view. The lip is of reddish tone, reticulated with white and blotched lightly with yellow. These Orchid novelties were exhibited by Mr. E. H. Davidson, Borlases, Twyford.

Angræcum o'brienianum.—A pretty, pure white flowered variety. Shown by J. S. Bergheim, Esq., Belsize Court, Hampstead.

NEW FRUITS.

Melon John Murray.—This variety is characterised by its exceptionally deep scarlet flesh, and, having been on trial at Wisley, was given the high award of a first-class certificate. From Messrs. William Rowlands and Co., Liverpool.

Apple Padnal Seedling.—An excellent cooking Apple with a certain leaning towards Warner's King, and possibly also to Potts' Seedling. Fruits

and fruiting branches were on view, an award of merit being granted on the recommendation of a sub-committee who had inspected the stock. A remarkable cropper and of good size. Exhibited by Mr. R. Roberts, Padnal Hall, Chadwell Heath.

All the foregoing plants and fruits were shown at the Royal Horticultural Society's exhibition on the 27th ult., when the awards were made.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SEEDLING BORDER CARNATIONS (C. R. A.).—The colour defects to which you refer should be regarded in the light of sports, and they may or may not appear again. To some extent this reappearing or otherwise may be governed by proportion; that is to say, if an entire flower is changed, then the shoots attached thereto may, and usually do, reproduce the change. When, however, a flower is only partly transformed, anything may happen. Hence you had best consult your own desires. Calyx splitting is a fault rather than a weakness, and may be due to a badly-shaped calyx, to abnormally full-petaled flowers, or to excessive disbudbing where this is done. If the calyx is of the Pear-shaped order—big at the top and narrow at the bottom—throw the plant away; it will never be any good. If long, and the present splitting is merely a slight side burst, it may have resulted from the season or from excessive vigour. In youth, seedlings put on much of this, and some of it is lost in future years. Usually, however, only the moderately long, cylindrically-formed calyces are those which remain intact. Perfect calyces are as rare as perfect flowers, and such as these rarely reach 5 per cent. of the seedlings raised by the specialists.

TIGER LILIES AND OTHER QUESTIONS (C. V. B.).—The leaf disease is doubtless that which attacks many kinds, and for which the ever-changing climatic conditions are in some measure responsible. By spraying with sulphide of potassium (half an ounce to two gallons of rain-water) once a fortnight in the early stages of growth, or, say, from when the growth is 1 foot high till the stem is fully grown, it might be kept in check, or prevented from doing any great harm. It would help matters if you collected the diseased parts and burned them. You might certainly transplant the bulbs when flowering is over, and fresh soil and a fresh site might have a beneficial effect. Now that September is here, you can transplant the Meadow-sweet and other things. We must, however, warn you as to the weed-like character of such things as Willow-herb, which is pretty enough in woodland places, though hardly a plant for the garden. You are a little impatient as to the Roses, which at least require to become established and make shoots in their new home before they are capable of giving a good account of themselves. The big rods now forming should be encouraged and retained, as upon the maturing of these a good flowering another year depends. All small, twiggy growths at the base might now be cut away.

TREES AND SHRUBS.

ESCALLONIA HYBRID (A. M., Ambleside).—The specimen of Escallonia sent for examination appears to be, as you suggest, a hybrid between *E. philippiana* and *E. macrantha*. It has much of the habit of another hybrid, *E. langleyensis*, but differs from that by reason of its pale-coloured flowers. We advise you to grow the plant in a good position for a year or two to test it; then if it appears to keep quite distinct and is good in habit and flowering qualities, it might be named and put into general cultivation. We do not know of a kind just like it.

SHADE TREE FOR LAWN (G. G.).—From what you tell us of your lawn, we should say that you have not room for another tree, especially one which, to be of much use, must be a fairly large-growing one. The suggestion we venture to make is that the Apple tree you mention should be removed, and a Weeping Ash or Weeping Wych Elm placed in the position it now occupies. It is not a good

plan to overcrowd a lawn with trees, for a great deal of the pleasure attached to a garden is derived from a good stretch of lawn; moreover, by crowding the grass with trees, the turf becomes weak, and in winter-time a considerable quantity of moss appears.

THE GREENHOUSE.

NORFOLK ISLAND PINE (R. S. M.).—It is quite possible to root the top of your plant of *Arancaria excelsa*. If you have a close and warm propagating-case, the top may be removed bodily and be inserted as a cutting; but if you have to rely on an open house or room, it would be better to do as you suggest and moss the stem round. To do this make an incision in the stem through a joint in an upward direction for 1½ inches or so. Insert a small piece of wood to keep the slit open, then cover the wound with a good bandage of moss and sand, binding it on so that there is no fear of its slipping. Keep the moss moist until roots appear through it. When well rooted remove the head and place it in a small pot in moist soil, but do not give any water for a few days. If you prefer to place a pot round the moss after the roots show, you may do so, but you will probably have a difficulty in dividing the pot in the first instance. The best way to do this is to mark the pot with a pencil, then file a ridge round. After this, a gentle tap with a hammer will break it in the required place. It may then be placed in position with the aid of stakes and string.

AURICULAS AND THE WOOLLY APHIS (J. E.).—The woolly aphis is very troublesome to growers of Auriculas, and the late Mr. James Douglas, who was unsurpassed as a cultivator of these beautiful flowers, used to advise having a pepper-box of Tobacco powder and freely sprinkling the roots, from which as much as possible of the soil had been removed. As this, however, proved ineffectual in your case, the advice of another successful cultivator may be of service. He says the best remedy against the aphis is soft soap dissolved in water. All the soil must be removed, and the roots immersed in the solution. Then they should be laid upon the palm of the left hand and well scrubbed with a soft-haired brush. Should the pests gather round the neck of the plant at a time when it would be injurious to remove the soil, this soap and water may be applied with a small brush to the infected parts. We advise you to try this on two or three of your worst plants first, and note the results before proceeding further. We question if mustard would do any good. If the old pots are to be used, it is most essential that they are thoroughly scalded beforehand, as the eggs of the pest may be adhering thereto. The soil, too, had better be sterilised.

ROSE GARDEN.

NAMES OF ROSES (C. F. F.).—No Rose-grower of any repute would have sent you Roses so glaringly inaccurate as those you send us. The white one is White Dorothy Perkins, and the two reds are Crimson Rambler and Flower of Fairfield.

ROSES FOR LAWN PLOT (Amateur, Glasgow).—You would do well to plant a few pillars in this plot, as they would tend to relieve it of flatness. Moreover, some Roses, such as Hugh Dickson, bloom more freely when trained as pillars. A few good sorts would be Hugh Dickson; J. P. Clark, Grass an Teplitz, Zepherin Drouhin, Lina Schmidt-Michel, Sarah Bernhard, Rosette de la Legion d'Honneur, Gustave Rezis, Avoca, Lady Waterlow, Conrad F. Meyer and Nova Zembla. Some good decorative sorts to grow as bushes would be Mme. Abel Chatenay, Mme. Ravary, Caroline Testout, Edu Meyer, Harry Kirk, Antoine Rivoire, General Maearthur, Gustav Grunerwald, Prince de Bulgarie, Lady Ashton, Mme. Jules Grolez, Joseph Hill, Mme. Leon Pain, Pharisæer, Countess of Derby, Duchess of Wellington, Mrs. Alfred Tate, Killarney, Lady Battersea, James Coey, Laurent Carle, Mrs. Aaron Ward, Mrs. A. R. Waddell and Viscountess Folkestone.

MISCELLANEOUS.

WEEDS IN POND (C. J. S.).—Copper sulphate may be used at the rate of 2½ oz. to 10,000 gallons of water for killing weeds in ponds, although it is often used in slightly lower proportions; 2oz. to 10,000 gallons has been found satisfactory when the weed has not been very thick. As an instance of how the amount may be varied, some authorities recommend using one part of copper sulphate to from 750,000 to 1,000,000 parts of water. We have known the above proportions used for several years without ill-effect.

TO CLEAR THE SCUM OFF THE SURFACE OF A POND (Perplexed).—If, as you say, the scum on your pond appears to be of a dusty character, we imagine that the water is stagnant. By causing it to be disturbed, such as would be the case by letting the water run through rather rapidly, the scum ought to be cleared away. We presume that the water is constantly flowing into and out of the pond. In the event of the scum being of a vegetable nature, you cannot do better than introduce copper sulphate at the rate of 2oz. to 2½oz. to 10,000 gallons of water. Tie the copper sulphate in a canvas bag and draw it through the water till dissolved.

NAMES OF FRUIT.—T. S.—1, Warner's King; 2, Round Winter Nonsuch; 3, Adam's Pearmain; 4 and 11, Tower of Glamis; 5, Ecklinville Seedling; 6, Old Hawthornden; 7, Gold Medal; 8, Annie Elizabeth; 9, Fearn's Pippin; 10, Beauty of Kent; 12, Mank's Codlin; 13, Worcester Pearmain; 14, Striped Beaufin; 15, Yorkshire Beauty; 16 and 20, Pickering's Seedling; 17 and 21, Blenheim Orange; 18, Mère du Ménage; 19, King of the Pippins; 22 and 23, Lord Suffield.—T. H. O. Pease.—

1, Koswick Collin; 2, Devonshire Quarrenden; 3, Beauty of Bath; 4, Lord Grosvenor; 5, Flanders Pippin; 6, Cat's-head; 7, Mère du Ménage.—E. Martin.—1, Margit; 2, White Must.

NAMES OF PLANTS.—M. F. F.—Phloxes: Scarlet and white, Flambeau; mauve and white, Eugénie Danzanvillers; deep mauve, Le Mahdi; pink and white, Elizabeth Campbell; pink with red centre, Selma. The other plant is *Lupinus polyphyllus roseus*. In future, when sending plants for naming, please attach numbers to the specimens.—Farmer.—Lychuis chalcidonica.—H. S. C.—Rose Francois Foucard.—P. H.—1, *Linaria pilosa*; 2, *Anthriscus deltoideus* variety; 3, *Sedum* species, send in flower; 4, *Sedum asiaticum*; 5, *Spirea Aruncus* (Goat's Beard); 6, *Thalictrum minus*; 7, send in flower; 8, *Pulmonaria officinalis* (common Lungwort); 9, *Veronica virginica rosea*.—A. Midgley.—Apparently *Polygonum viviparum* (Alpine Bi-stort).—John Turner.—1, *Populus canescens* (Gray Poplar); 2, *Esculus flava* (Sweet Buckeye).—Woodman.—1, *Eucryphia pinnata*; 2, *Lythrum Salicaria* (Loosestrife).

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

DESPITE the abnormal wetness of the season, a display of much excellence was brought together on the 27th ult. Hardy flowers were, indeed, finer than could have been expected, the Dahlias, if not as yet in characteristic beauty, being of much merit. The outstanding features of the meeting, however, were the collections of pot-grown fruit trees. Here, indeed, was food for the eye and the mind, and, anon, it may be for the body also. To the gardener and visitor such exhibits are an education, and are welcomed accordingly. They were, indeed, magnificent of their kind.

FLORAL COMMITTEE.

Present: H. B. May, Esq. (chairman), and Messrs. C. T. Drury, J. Green, George Gordon, W. J. Pean, G. Reuthe, W. Bain, John Dickson, Charles Dixon, H. J. Jones, J. T. Bennett-Poe, Charles E. Pearson, W. P. Thomson, G. Paul, W. J. James, E. A. Borles, R. C. Notcutt, F. Herbert Chapman, C. Blick and E. H. Jenkins.

Messrs. James Veitch and Sons, Limited, Chelsea, displayed a highly-interesting table of greenhouse flowering plants, inclusive of distinctive groups of Streptocarpus in white, rose, blue, pink and violet shades in plants seven months old from seeds; the pretty *Browallia viscosa*, flowering trails of *Passiflora princeps* and *Schubertia grandiflora* (scarlet and white flowered respectively), a delightful colony of the hybrid *Javanico-jasminiflora* *Rhododendron*, *Browallia speciosa* major, a handsome group of *Cannas* in rich and varied colouring, together with an interesting lot of *Begonias*, of which E. Froebelii incomparabilis, with crimson scarlet flowers and woolly petioles and buds, was very striking. This low-habited, free-flowering plant is among the most ornamental we have seen. *B. Lucerna*, with drooping tresses of pink flowers and white-freckled leaves, was also in good form.

A small group of Perpetual-flowering Carnations came from Messrs. Harbutt, Humberstone Gate, Leicester, Mikado and May Day being among the varieties shown.

Messrs. Piper, Bayswater and Barnes, arranged amid stately Palms a fine lot of *Lilium speciosum cruentum* and other richly-coloured varieties, the plants well grown and flowered. *Asparagus Sprengeri* constituted a good margin. Some nice examples of *Wahlenbergia vincaeflora* also came from this firm.

The Misses Hopkins, Shapperton-on-Thames, had a pretty rockwork exhibit, arranging *Sedums*, *Campanulas*, *Potentillas*, *Linarias* and *Viola* species effectively among the rocks.

Mr. Amos Perry, Enfield, had a fine display of Delphiniums, the product of spring-planted stock, which as a succession to the main flowering is of much value. Mrs. Creighton, purple; Lizzie, sky blue, white eye; King of Delphiniums, an ever-popular variety; Duke of Comancha, dark blue single, with conspicuous white eye; Perfection, rosy lavender, with outer petals pale blue, a very fine; and Amos Perry, rosy mauve and dark blue, a most showy variety, were among the best in a really grand lot. Persimmon, sky blue, white eye, is also a notable single-flowered sort.

Messrs. William Fells and Son, Hitchin, arranged a table of hardy plants, such as alpinas in pots, cut herbaceous subjects of the bolder types, together with a small sandstone rockery whereon were planted *Campanulas*, *Linarias*, *Lysimachia Henryi*, *Dianthi* and the like, while at each end was seen a collection of *Violas* and *Pansies* set in tubes.

Mr. James Box, Lindfield, Sussex, had a superb and showy lot of hardy cut flowers, the herbaceous Phloxes being exceptionally fine. Widar, mauve blue and white; Gloire du Mare, red fish purple; Iris, deep violet; Le Mahdi, deep mauve; General Van Heutz, salmony scarlet, white eye, very fine; and Selma, pink, were some of the best in a superb lot. *Gladioli*, herbaceous *Lobelias*, *Kniphofias* and *Artemisia lactiflora* were all well displayed.

Messrs. William Cutbush and Sons, Highgate, N., had a capital exhibit of hardy plants in conjunction with Water Lilies and other plants. The *Pentstemons* were particularly fine and made a big show. *Gladiolus Hollandia* (a fine bluish pink), with masses of *Kniphofias*, *Calliolas*, *Phloxes* and *Hedoniums* were all good and showy. *Polygonum cymosum album*, *Stenanthium robustum*, *Crimum Powellii* and *C. P. album* were other important items in a fine group.

Mr. W. A. Gwillim, Sidcup, Kent, had a superb lot of *Begonia* flowers on boards, and splendid pot-grown examples to boot, the magnificent double flowers of the

latter being of unusual size and fine form. A collection of herbaceous plants was also arranged by this firm.

Messrs. Dobbie and Co., Edinburgh, showed a particularly fine lot of the Collarette Dahlias, some five dozen stands and vases being arranged with admirable taste and skill. Among the more striking were Queen Bess, reddish mahogany and gold; Meteor, crimson and gold; Exposition de Lyon, ruby red and creamy inner florets; Balmoral, reddish violet and white; Princess Louise, crimson guard petals, inner ones primrose; Frogmore, scarlet and gold; Antwerpia, crimson-scarlet and yellow; and Mme. Poirier, violet blue, with white inner florets. These made a very showy group.

Mr. L. R. Russell, Richmond, arranged what was virtually an avenue of *Celosias* to an accompaniment of *Begonias* of the Rex section, the latter being exceptionally well-grown specimens. The *Celosias* were pot-grown examples, and were in groups of crimson, ruby, yellow and pale orange, the whole making a showy display. A background of variegated *Eulalia* played its part uncommonly well.

Mr. G. Reuthe, Keston, Kent, had another of his varied and interesting groups of alpinas and shrubs, which never fail to attract. *Erica vulgaris* Foxii (quite a miniature), *E. v. flore pleno* (a charming plant), *Linarias* in variety and *L. alpina rosea* were most charming. *Silene Elizabethae*, *Tunica Saxifraga fl.-pl.*, *Viola bosniaca*, *Crimum Powellii* and *Desfontainia spissa* were among the more attractive on this occasion. Some good pans of autumn Cyclamen were also noted.

Mr. Ernest Dixon, Putney and Roehampton, had a small group of showy herbaceous things, such as Phloxes, *Pentstemons*, *Lupinus*, *Delphiniums* and the like. *Viola cornuta atropurpurea* was also well shown.

Clerodendron carulea is a pretty and uncommon blue-flowered climbing species exhibited by Sir Trevor Lawrence, Bart., Dorking, the plant also being known, we believe, as *C. ugandense*. It is as charming as it is interesting.

Mr. J. Hindson, gardener to Mr. Leopold de Rothschild, Gunnersbury House, showed in tubs some superb examples of blue-flowered Water Lilies, *Nymphaea giganta* variety *hudsoniana* being magnificent. The giant deep lavender blue flowers were 8 inches in diameter. *N. pulcherrima* and *N. stellata* Berlin variety were both of great beauty and merit, if lacking the fine colour and handsome proportions of that first-named.

Mr. Reginald R. Cory, Duffryn, Cardiff, exhibited Dahlias of several sections, Pompon, Collarette, *Pæony* and others. The flowers were well displayed in stands.

The Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. Beckett), had a remarkable exhibit of cut *Buddleia* sprays in some dozen or more sorts. *B. variabilis magnifica*, *B. v. rosea*, *B. v. gigantea*, *B. v. Delight* and *B. nivea* were the more distinct.

Messrs. J. Cheal and Sons, Crawley, had a charming lot of Dahlias, particularly of single-flowered varieties, Brilliant, Glencoe, Rosebank Scarlet, Betty, Mrs. Miller, Elmira and Kitty being noted in a good lot. *Pæony* and *Cactus* flowered sorts were also well shown.

Messrs. H. Cannell and Sons, Swanley, had a large variety of *Cactus*, decorative and other Dahlias, The Bride, Harold Pearman (yellow), Mrs. Douglas Flemming (white) and J. H. Jackson being all good *Cactus* varieties. In the giant single-flowered class, Cannell's Favourite (crimson and gold) and White Cloud (very handsome and pure) were the best. Collarette Dahlias and a handsome lot of double *Begonias* were also shown. A dozen flowering plants of *Crassula falcata* contributed to a fine display.

Messrs. H. B. May and Sons, Edmonton, exhibited Ferns, together with *Ixoras* and the brilliantly-coloured *Croton edmontoniense*, *Nephrolepis Marshalli* compacta was in excellent form.

Messrs. G. Bunyard and Co., Maidstone, had a very showy exhibit of hardy plants, though chiefly of *Delphiniums*, *Pentstemons*, hardy *Fuchsias*, *Scabiosa* and the like. *Crimum Powellii* and *C. P. intermedia* were also noted, while King of *Delphiniums* and the blue, white-eyed *D. Nerissa* were both seen in nice groups. The many varieties of the Japanese *Anemone* were all well shown.

Messrs. William Wells and Co., Merstham, brought a capital display of Phloxes, such as Le Mahdi, King Edward (reddish), Rose Queen and Arthur Rane (pink) being very fine. *Veronica subsessilis* and *Senecio chlororum* were both in excellent condition.

FRUIT AND VEGETABLE COMMITTEE.

Present: G. Bunyard, Esq. (chairman), and Messrs. A. H. Pearson, W. Poynter, John Harrison, Owen Thomas, James Vert, Joseph Davis, George Kelf, A. R. Allan, W. E. Humphreys, J. Willard, E. Beckett, G. Woodward and J. Cheal.

From Messrs. James Veitch and Sons, Limited, Chelsea, came a magnificent collection of pot-grown fruit trees, Pears, Apples, Plums and the like, to the extent of some one hundred and seventeen varieties in trained, standard and pyramidal examples. For such exhibits as these, educational as they are in the highest degree, no praise is too great; hence we extend our need of it without reserve. From the cultural standpoint alone such an exhibit, varied and complete as it undoubtedly was, merited high praise by reason of the perfection attained, while from the standpoints of extent and comprehensiveness such magnificent collections are only possible to a few. In so representative a group we can only hope to give a selection. Of dessert Apples, Duchess Favourite, Charles Ross, Christmas Pearmain, Langley Pippin, Worcester Pearmain and James Grieve were the best; while of culinary Apples, Bismarck, Alexander (very handsome-looking), Cox's Pomona, Lane's Prince Albert, Warner's King, Stirling Castle and Peasgood's Nonsuch claimed attention. Of Pears, Bourne Rose, Bourne d'Amaldis, Clapp's Favourite, Dr. Jules Guyot, Louis Bonne of Jersey and Pitmaston

Duchess were of special merit; while of Plums we noted such excellent sorts as Coe's Golden Drop, Bullace The Langley, Jefferson, Reine Claude du Comte Hathem, Grand Duke and Lawson's Golden Gage. The comparatively small pots and trees, loaded with fine fruits, were a great tribute to the cultural skill demonstrated as a whole. This unique exhibit was deservedly awarded the Hogg gold medal, the top rung of the fruit-tree ladder.

Messrs. G. Bunyard and Co., Maidstone, also displayed a remarkable and varied exhibit of orchard-house-grown fruit trees in pots, in conjunction with hardy fruits of a varied character, into which a dozen varieties of Cob Nuts and Filberts and a similar lot of ornamental Crabs entered. The pot-grown fruit trees, however, were those which attracted most attention, and here we saw superbly-grown examples of Plum, Pear and Apple as good as could be imagined or desired. Apple trees loaded with Allington Pippin were superbly finished, white such as Wealthy, Gascoyne's Scarlet (of rich colouring), Peasgood's Nonsuch, Cox's Orange Pippin, Baumann's Red Winter Reinette and Emperor Alexander were in every way excellent. Small trees of the good culinary Apple Rev. W. Wilks displayed the free-cropping attributes to advantage. Pears were also in good variety, while Plums were represented by such as Monarch, Coe's Golden Drop, President and others. In addition to these, a large collection of gathered fruits was shown of rare quality. A gold medal was deservedly awarded for this collection.

Mr. G. Kelf, gardener to the Hon. Mrs. Merry, Danesbury Park, Welwyn, Herts, brought a collection of about eighteen varieties of Plums in boxes, grown in the open air. The collection embraced all the best-known varieties, as Kirke's Monarch, President, Coe's Golden Drop, Jefferson, Poad's Seedling and others.

An assortment of Runner Beans and culinary Peas was contributed by the Rev. Chalmers Hunt, Hitchin, while from the Comtesse of Ilchester, Holland House, came some eighteen or so varieties of ornamental Crabs.

Messrs. Stuart Low and Co., Enfield, staged a collection of pot-grown Figs, Apples and Grapes in capital condition, while Carrots of a model type, without spot or bluish, in both long and short horn varieties, came from Mr. Z. Gray, Sanday.

Messrs. Cannell and Sons, Swanley, had large representative collections of gathered fruits, Apples, Pears and Plums being well shown. Of the last-named we noted such as Washington, Jefferson, Goliath, Kirke's Blue, Rivers' Late Orange, Cox's Euphor and Prince Englebert, all in capital form.

ORCHID COMMITTEE.

Present: J. Gurney Fowler, Esq. (chairman), Sir Jeremiah Colman, Sir Harry J. Veitch, and Messrs. J. O'Brien, W. Bolton, Gurney Wilson, de E. Crawshaw, Arthur Dye, H. G. Alexander, J. E. Shill, W. H. Thatcher, Walter Cobb, A. H. McBean, T. Armstrong, F. J. Hanbury, Stuart H. Low and R. A. Rolfe.

Messrs. Sander, St. Albans, had a very beautiful lot of *Cattleyas* and *Laelio-Cattleyas* in variety, also such good things as *Burlingtonia fragrans*, *Cypripedium Rossettii*, *Disa grandiflora*, *Cattleya Stauvior* alba (very pure and good) and the strange-looking *Catasetum maculatum*. *Laelio-Cattleya* Walter Gott was also noted among distinct things.

Mr. H. Pitt, Rosslyn, Stamford Hill, had in a most interesting lot *Cattleya Source d'Or* (choice and distinct in colour), *Odontodia Charlesworthii*, *Epidendrum Wallisii*, *Catasetum fimbriatum* (very quaint-looking) and the lovely white, yellow-tipped *Laelio-Cattleya Delicata*.

Messrs. Charlesworth and Co., Hayward's Heath, included in a small yet choice lot *Aerides Lawrenceae* var. *sanderiana*, *Cattleya gaskelliana*, *Houlletia Wallisii* and *Lelia macrotaehya*. *Polycyema muscifera* was also remarkable for its fairy-like bronzy flowers and elegant grace.

Mr. E. H. Davidson, Borlases, Twyford, had a delightful lot of *Laelio-Cattleyas*, *Cattleyas*, *Odontodias* and *Odontoglossums* in pleasing variety. This exhibitor secured three awards of merit for his leading novelties, *Odontodia Enterpe* in this collection was singularly rich in colour.

Messrs. J. A. and A. McBean, Cocksbridge, Sussex, had a rather handsome plant in flower of *Vanda sanderiana*, which, with richly-coloured *Odontodias* and *Odontoglossums*, were very attractive.

Messrs. Stuart Low and Co., Enfield, had a fine example of *Laelia crispata*, together with *Oncidium varicosum* Rogersii, *Odontodias* and others. Some good examples of *Dendrobium Phalenopsis* were also noted.

ABERDEEN HORTICULTURAL SOCIETY'S SHOW.

THE great three days' show of this society took place in the Duthie Park, Aberdeen, on August 22, 23 and 24, and was one of the best yet held, although the lateeness of the season has told on certain exhibits. The entries were practically the same as in former years, and the exhibits did full credit to such an important horticultural centre as Aberdeen. It is impossible in the space available to do justice to the show, but it may be said that pot plants were very fine in every way; that cut flowers were, as a rule, very good, Roses and Sweet Peas being perhaps the strongest classes. Fruit was good, and in some classes of superb quality, while vegetables were an outstanding section. In the professional classes Mr. W. Dick, Mr. J. Elder, Mr. A. Brebner, Mr. J. W. Brechin, Mr. J. Petrie, Mr. J. Burnett, Mr. A. Gillespie and Mr. J. Anderson were the chief winners with pot plants. For cut flowers Mr. A. Brebner led for eighteen Rose blooms, distinct; Mr. J. Burnett for twelve; Mr. J. Petrie for six bunches of decorative; and Mr. W. Lockhart for twelve Teas or Noisettes. Mr. A. Douglas was first for herbaceous plants.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

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NOTES OF THE WEEK.

Tulips and German Irises.—Now that the hulk-planting season is with us, it may be useful to recall a charming combination of German Irises and Tulips that was noticed last May. This was a hold grouping of the common blue German or Flag Iris, thinly interspersed with the lavender-coloured Tulip the Rev. H. Ewbank. Those who possess groups of the Iris in question should procure some bulbs of this Tulip during the next few weeks and plant them between the Irises.

White Phloxes and Gladioli.—Since writing the note about the white Phlox Mrs. E. H. Jenkins in our issue for last week, we have seen a large bed filled with it and the scarlet *Gladiolus brenchleyensis*, in the proportion of two parts Phlox and one part *Gladiolus*. This is a simple effect that might be carried out in many gardens, but room should be left, when planting the Phloxes in autumn or winter, for the *Gladiolus* corms, which would be planted at the end of March or early in April.

Gladioli and Gypsophila.—One of the most effective hedding arrangements we have seen this month is that of late-flowering *Gladioli* over a groundwork of *Gypsophila paniculata*. The *Gypsophila* is kept to a height not exceeding 18 inches, and the tall, handsome spikes of the *Gladioli*, with sword-like foliage arising from a cloud of *Gypsophila*, is most effective. The *Gladioli* are seen to the best advantage if each bed is kept to one colour. Dark crimson and deep pink shades lend themselves admirably to this arrangement.

Japanese Windflowers.—When thoughtfully planted, Japanese Windflowers or Anemones may be used with good effect for an early autumn display. If grown under the shade of trees and fringed with the little autumn-flowering *Cyclamen*, *C. europæum* and *C. hederæfolium*, the association of colour at this season, when the plants all flower together, is exceedingly beautiful. *Allium Huteri*, a little-known species with purple flowers and about eighteen inches high, is well adapted as a groundwork for Japanese Anemones, and produces a fine colour effect at this time of the year.

Paved Lavender Walks.—Lavender walks were pleasing features of gardens in hygone days, and it is gratifying to note that they are being revived in many places. A paved walk lends an old-world appearance quite in keeping with this phase of gardening, and if Harebells or dwarf blue *Campanulas* can be induced to grow between the paving-stones, the effect in late summer is most pleasing. The blue *Campanulas*, the Lavender flowers and its grey foliage all enter into perfect harmony of colour. The silvery blue variety of

Campanula pusilla known as Miss Willmott is specially adapted to this purpose.

A Useful Hardy Heath.—*Erica vulgaris* Foxii is one of the dwarfiest, daintiest and most desirable of the hardy Heaths now in flower, and a delightful plant in every way. Its rounded, cushion-like tufts are particularly dwarf and compact, the whole plant being studded with pinkish flowers on short, erect stems. The plant is so eminently fitted to the cool and sheltered places of the rock garden that those desiring the best of everything should make a note of this elegant and pretty variety.

Sternbergia lutea.—One of the signs of the oncoming autumn is the appearing of the flowers of this small group of bulbous plants, the best of which, perhaps, for garden purposes is that known as *S. l. angustifolia*, and which is characterised by narrower leaves of a rather dark and shining green. The rich yellow flowers of both are a great attraction in the garden at this season, and where the plants succeed they deserve much encouragement. The species are impatient of removal, and should be left alone to become established. They grow best in sandy loam of considerable depth.

Torch Lily, or Flame Flower.—Of early autumn flowers few are more striking than the Torch Lily, or Flame Flower. It is seen to the best advantage when planted in bold clumps by the water-side or in large irregular beds in the pleasure grounds. The handsome spikes in warm orange red tones of colour have earned for this plant the popular title of Red-hot Poker. The species *Kniphofia aloides*, or *Tritoma Uvaria* as it is still called in many gardens, is perhaps the oldest, and certainly one of the best of the family. In hard winters many kinds have perished, but this may be arrested by a covering of dry leaves or ashes in late autumn.

A Wonderful Potato Crop.—Considerable interest has been aroused in the Croydon district recently by an extraordinary crop of Potatoes. It seems that last spring the St. Barnabas, Sutton and District Horticultural Society purchased fifty-one 1lb. bags of seed Potatoes, each containing nine tubers, and distributed them among the members. Four prizes were offered for the heaviest yield and four for the best quality. The happy winner of the first prizes for both weight and quality was Mr. C. F. Clark, The Gardens, Banstead Grange, Banstead, Surrey. His crop turned the scale at 231½lb., made up of 29lb. 2½oz. of ware size, 9lb. 7oz. of seed size, and 2lb. 14½oz. of chats or small ones. The variety was a special selection of The Colleen. It would be interesting to know how frequently the stems of the plants were layered during their growth.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Diseased Sweet Peas.—The diseased Sweet Peas mentioned in your issue last week, page 445, as sent for the inspection of the Royal Horticultural Society's scientific committee, were grown in a private garden, and not at the Shelley Sweet Pea Farm, where no streak has appeared.—T. H. DIPNALL.

Tunica olympica.—In the Olympian Rock Tunica we have a counterpart of the better-known T. Saxifraga, but with white flowers. It is as free-growing, as hardy and as pretty in its graceful habit. For a rockery the Olympian Tunica deserves consideration, either alone or as a companion to T. Saxifraga. A dryish soil and a sunny place are desirable for these pleasing flowers.—S. ARNOTT.

Calceolaria amplexicaulis.—This handsome but somewhat neglected plant, with its flowers of a beautiful soft lemon yellow, is, without doubt, the most attractive of the whole genus that is used for bedding purposes. A large bed filled with this and intermixed with the beautiful blue *Salvia patens* gives a very pleasing effect during the summer. Like all other Calceolarias, it requires a little shade and a good loamy soil enriched with well-decayed manure. Cuttings should be taken during September or early in October and put in boxes, but they require more warmth during the winter than the ordinary bedding-out Calceolaria.—F. G. P.

Dwarf French Bean Sutton's Green Gem.—It would be well if the characteristics of this Haricot Bean were better known. Here we always sow a good breadth of it, and guests who have not previously tried it are invariably charmed with it. The seeds are pale green in colour, and, when properly cooked and served, the dish presents a most appetising appearance. When stored the seeds do not, as a rule, lose their green colour, and they make a tempting and agreeable adjunct to our meals throughout the winter. The plant is a prolific bearer, giving a good crop here in both wet and dry seasons.—F. HERBERT CHAPMAN, *Rotherside Gardens, Rye.*

Cordon Gooseberries.—There are many gardens where cordon-trained trees of the Gooseberry might be introduced with great advantage. Planted at the foot of walls between other trees on a trellis consisting of wood or wire, or even trained to stakes, they are most useful, and much waste land can be profitably utilised by their introduction. Single, double or treble cordons may be used, according to the space to be covered. I will not enter into details of cultivation here; this brief note is simply to call the attention of gardeners to the value of cordon Gooseberries for planting on any vacant wall, fence or trellis, no matter whether the site is north, east, south or west.

Planting Conifers.—The present month is considered by several experts to be a good time for the planting of many coniferous subjects. After the heavy rainfall small conifers will be moist at the roots, and will not be liable to suffer from drought. Unfortunately, however, the temperature of the soil is very low, especially in low-lying, wet localities, and it may not be advisable to plant choice subjects unless the land is well drained, either naturally or otherwise. Under these circumstances it would be better to defer the planting until spring. Where the conditions are favourable,

planting may be done now with every prospect of success. With very small plants the risk of failure is reduced to a minimum.—COLIN RUSE, *Lambay Island, Rush, County Dublin.*

Rose Shades for Wet Weather.—Most rosarians have been troubled with hundreds of spoilt blooms owing to the continuous wet weather prevailing. Those who have not used the "Autumn" Protector should procure some of them. They are made like the summer shades, but covered with a transparent material, and are most useful. By using these shades, clean, well-developed blooms are obtained, and many varieties that will not open during a damp, cool season such as the present come out quite easily. Roses have bloomed remarkably well, but their beauty has been marred by the incessant rain. These shades can be had from Mr. John Pinches, Camberwell, and repay the small outlay in aiding rosarians to cut good blooms in any weather.—E. E. F.

Planting Hardy Flowers.—The note by "J. L. E.," page 437, issue August 31, is a timely one. The reference to the preparation of the soil is important, as thousands of plants are put in annually without any previous preparation of the soil, and when they do not succeed, the owners wonder why. The great majority of hardy plants will grow if merely heeled-in in the ground, and it is owing to their hardness that they often get badly planted. Autumn planting is much better than spring planting, as a rule, as the plants put in in the autumn grow so much stronger the following summer. I have both planted and seen others plant hardy perennials in autumn and in spring, and never found the latest-planted ones to do as well as the others, with the exception of the Pyrethrums. A deep, rich loam, or a deeply-trenched poor soil moderately enriched with manure, will prove a far superior rooting medium to one, however rich it may be, which is simply pricked over on the surface and left with a hard, unbroken pan below.—B.

A Useful Chinese Vine.—Numerous species of *Vitis* have been introduced into our gardens from China during the last ten years. Among these one of the most distinct and useful is *V. henryana*. A particularly valuable asset is that it is self-clinging. The pinnate leaves consist of five leaflets, the central and largest leaflet being 2½ inches to 3 inches long and an inch wide. The mature leaves are dark green, with silvery markings along the principal veins. The young shoots and leaves are red in colour, the under side in particular being a rich shining metallic red. In autumn the leaves assume bright red tints, the silvery hue of the veins becoming even more conspicuous. Experience, so far, with *V. henryana* seems to suggest that it is not perfectly hardy during a severe winter in exposed positions, though this may be only in a young state. A plant growing vigorously on a sheltered north-west wall, where it has passed unharmed through five or six winters, suggested the writing of this note. Under glass in a cool or cold greenhouse and corridors the red tints of *V. henryana* are even more beautiful. Cuttings made of the young growths root readily in a close frame during late summer and autumn.—A. O.

The Chimney Bell-flower.—Quite recently, when looking through the glass department at the trial grounds of Messrs. Sutton and Sons, Reading, I was struck with the many giant examples of this old-fashioned perennial, *Campanula pyramidalis*, then in the heyday of their flowering. The plants were of such exceptional size and ornamental value that one naturally enquired by what special

method such grand specimens had been obtained. In the ordinary way the seeds are sown in spring, pot culture being resorted to all along the line, the flowering resulting when about eighteen months old. The system employed at Reading is somewhat different, and is both simple and economical. It is as follows: A seed-sowing is made early in the year, and the young plants, having been grown on, are planted out in the open, where they remain not only the whole of the first winter, but right away into the autumn of the second season, when they are lifted and potted. In this way, and accorded elbow-room, giant rosettes result at a minimum cost of labour and trouble, any plant attempting to spike in the meantime being discouraged. Given cold-frame treatment after lifting, the plants are brought into the conservatory in the early summer-time to flower, being then about two and a-half years old.—E. H. J.

The Famous Auchmore Vine.—Although usually spoken of as the Auchmore Vine, this famous Grape Vine is at Kinnell. Both houses are, it is true, on the one estate, and are the property of the Marquis of Breadalbane. While the gardens at Kinnell and the surrounding district are very interesting, it was the Vine that was the main reason for our pilgrimage on a recent August morning, and I will confine my few remarks to this wonderful object. The house, which is entirely filled with this one Vine, is 172 feet long and 15 feet wide. The stem, 9 inches from the ground, girths 38 inches. The whole Vine is in the best of health, and is carrying a heavy crop of excellent Grapes. The bunches are of fair size, some of them scaling over three pounds, while the berries are large, with heavy bloom and excellent finish for a Black Hamburg. Roots of this Vine have been found in a park 150 yards distant from the house. It is truly a wonderful sight, and the greatest credit attaches to the several gardeners who have had charge of this Vine during its eighty odd years of life. Mr. Easson, who at present has it under his care, is maintaining to the full the skilful treatment that has always been extended to it, and Lord and Lady Breadalbane must be justly proud of their unique Vine, of which they take such care.—C. BLAIR, *Preston House Gardens, Linlithgow.*

The Madonna Lily.—The illustration of the bed of Lilies, page 436, issue August 31, is very charming, and Mr. Jenkins, on the same page, gives some concise, useful hints on the planting or transplanting of the bulbs. I for one would have liked to see some reference to the dreaded disease by the same writer, as about twenty years ago I had to deal with large beds of this Lily, which were at the time badly diseased. I had at that time just taken charge of a large garden, the vegetable garden alone covering an area of six acres, and these Lilies were mainly grown in two borders, one very dry, the other medium. The plants were very badly diseased, so early in the autumn the bulbs were lifted, soaked in water for a few hours, and then replanted in another quarter of the garden. The bulbs were never exposed to the air from the time they were lifted till they were replanted. The following year the plants were less diseased and flowered better. After three years had passed, the bulbs were once more lifted and replanted in a fresh border, but although they did very well, the disease never entirely disappeared. Manure was not put in, as the soil had been manured for other kinds of crops. Those bulbs left undisturbed practically died away.—Avon.

Fremontia californica.—I was pleased to see a reference to this flowering shrub on page 423, issue August 24, by "S. T." It seems to me that it is a scarce shrub in this country, and deserves to be more widely cultivated. At Crag Head, Manor Road, Bournemouth, there are two specimens growing on the north side of the residence of G. J. Fenwick, Esq. One is a splendid shrub—a tree I ought to say, perhaps, as it is nearly fifteen feet high—and during the flowering season was a beautiful object indeed. This residence is close to the sea, the south side facing it, and as the east winds are badly felt there at times, perhaps the *Fremontia* would not succeed as well there as it does on the more sheltered north side. In more inland districts the shrub would do well in any position if not unduly exposed to the east winds. The rooting medium is of a light nature and well drained.—B.

An Extraordinary Madonna Lily.—I am sending some flowering stalks of *Lilium candidum*. I have had the bulbs three years now, both single and in clumps. The bulbs have always been in fine condition and mostly of large size, but all have malformed blooms similar to those enclosed, and have been so each year. Some clumps have eighteen to twenty bulbs and stalks. Last season they were even stronger than this, and many were 6 feet to 7 feet high. I have seen the same result in two other gardens, where the stock came from the same source, unfortunately, through seeing the grand bulbs and condition of those I bought. I may say some have been grown south and some north of my cottage, and those in the other gardens are in quite different soil. Last season I parted some of the clumps and planted them singly in a well-manured trench (after Sweet Peas) and extra deep, but they are just the same this year. Can you tell me the cause of this, and the remedy if there is one; or shall I burn the lot? I may say I have some imported bulbs in the same border which have flowered splendidly this season, one with twenty blooms on a stem.—J. W. HATCHETT, *The Box, Cowbeech Hill, Hailsham, S.O., Sussex.* [We had the largest of the spikes sent by our correspondent photographed, and sent the photograph to Mr. E. A. Bowles, who is so well versed in abnormal plants. He replies as follows: "Surely the photograph is of *Lilium candidum* flore pleno? It is unusually fine, but I think in hot seasons I have seen it almost as long. Of course, the double form of *candidum* is not beautiful, as the doubling is really a case of proliferation of the axis, with perianth segments at intervals. I see Dr. Masters writes of it in 'Vegetable Teratology,' page 286: 'There is in cultivation a variety of the white Lily, *L. candidum*, sometimes called the double white Lily, in which the segments of the perianth, in place of being arranged in two rows, are greatly increased in number, and disposed in a spiral manner. In these flowers not only are the stamens and pistils thus modified, but also the upper leaves of the stem.' They will never go back to the normal form, and must have been sent out through

mixing of stocks in a nursery. I showed the photograph at the meeting of the scientific committee of the Royal Horticultural Society on Tuesday, the 27th ult. No one there had seen so fine an example before. One member, Mr. Worsley, had seen it near Cambridge this year. I feel sure it is an extra fine example, but the bract-like perianth segments we all thought were rather narrower than we had seen before. It would be a pity to destroy the bulbs altogether, and it would be interesting, if the owner would grow a few for a season or two, to



A SINGULAR FLOWERING SPIKE OF THE MADONNA LILY.

watch how constant the habit is and if other seasons affect it at all, or, failing that, I would grow and watch it, and perhaps Mr. Chittenden, Director of the Wisley Gardens, and the Kew authorities would also do so."—Ed.]

FORTHCOMING EVENTS.

September 17.—National Dahlia Society's Exhibition at the Crystal Palace (two days).

September 18.—North of England Horticultural Society's Show at Leeds.

DAFFODILS IN ROSE-BEDS.

FOR those who have ample room for all the Daffodils and all the Roses they wish to grow in their gardens, I am by no means sure that I would recommend as an ideal method growing both together in the same beds or borders. There is, however, a period, after the Roses have been pruned in the spring, when the Rose-beds look very empty and uninteresting, and those who desire something of interest in their Rose-beds at this period will find Daffodils very useful to supply interest to the beds and to light up the garden.

Others there are—and I am myself among the number—who find they have not room in their gardens to grow all the flowers, both of Daffodils and Roses, which they wish unless they adopt some method of this kind. For some twenty years I have practised this method, and the Rev. J. Jacob has suggested my experience might be of interest.

The disadvantages of the method are that the constant supply of manure given to the Roses, particularly in the resting season of the bulbs, is supposed to be unsuitable for Daffodils, and besides this the flowers, especially in windy weather, are apt to get badly scratched by the thorny stems of the Roses; while from the other point of view it is thought that the Queen of Flowers is impatient of any rival sharing in her palace, and that the disturbance to the roots of the Roses when the bulbs are lifted at the height of the growing season is much to be deprecated.

There is something in all these objections, but the disadvantages may be minimised with care and proper treatment. To begin with, the right kinds of Daffodils must be selected. There are some which certainly resent this treatment. The strong food is too much for them, and they either do little good from the start or become diseased after the first year or so. For the most part strong and vigorous growers must be selected; but when the right kinds are used they often do amazingly well and give very fine flowers, the bulbs often increasing faster than I could wish. Besides this, to succeed with this method care should be taken not to put on a heavy dressing of manure in the autumn and leave it there all the winter. This is a bad plan both for the Roses and the bulbs, and its injurious effect on the Daffodil leaves may often be plainly seen, particularly when growth has suddenly been checked by a February or early March frost.

It is also of much importance for both the occupants of the beds to keep the soil sweet. This is most readily accomplished by recourse to a dressing of lime from time to time. Although I am in the habit of administering this whenever I think it is required, I fancy its effect is particularly beneficial about the end of May or early June. Basic slag has a somewhat similar effect in sweetening the soil, but I have usually employed this in winter or early spring. Then as to the scratching of the flowers and leaves, this is a trouble at times in windy weather, but it need not be serious. The remedy is simple—prune early and prune hard.



TULIP MURILLO, A BEAUTIFUL DOUBLE VARIETY WITH FRAGRANT, PÆONY-LIKE FLOWERS.

Lifting the Bulbs is certainly rather a troublesome business. It must be done early—by the end of May—while the foliage is strong and will withstand a good tug, and it must be done carefully so as to injure both roots and shoots of the Roses as little as possible. I admit to a certain feeling of relief when it is over. It must be done frequently, at least every three years, and perhaps every other year is better. In order to facilitate it the bulbs should not be planted too deep, but they must be deep enough to be safe from injury during the summer hoeing. I often find it convenient when lifting the bulbs to break up the clumps, and replant at the same time a single bulb in place of each clump lifted. As soon as lifting is finished, stamp the bed well down and give a good watering for the sake of the Roses, and it will be found they have suffered very little, generally not at all.

The Best Varieties.—I have said strong growers should be chosen. Emperor, Empress, Victoria, Barri conspicuus and Autoerat all do well, and I do not get better Gloria Mundi or Albatross anywhere in the garden than in my Rose-beds. Rather curiously, Seagull is not quite so satisfactory for the purpose, and if used is better kept to the edges of the beds. This is also the case with most of the Leedsis, except Mrs. Langtry. Maximus is certainly capricious. Often it will do well for several years, and then suddenly and without warning become diseased. Lift it at the first sign of this happening and replant elsewhere. King Alfred, so far, has been a complete failure in Rose-beds; so have many of the newer Daffodils, even strong growers like Brigadier. Later on, when they are more common, and when, instead of growing on all the offsets, we are able to reject the weakly ones, these may be useful, but not now. Orangeman, however, has done well; so has Eyebright, but it increases too rapidly. The Tazettas do well in a sheltered spot, and Elvira (Poetaz) has been a great success for many years. Poeticus recurvus, the ordinary

Pheasant's-eye, is most successful in the rich soil of Rose-beds, and ornatus is fairly good; but many of the modern Poeticus varieties are hopeless failures. Almira I have tried over and over again, always with the same bad result; so, too, Juliet, Musidorus, Comus and Sonnet. Chaucer and Sidney, however, seem a little better. Most of the white trumpets, like tortuosus, are to be avoided; but Mme. de Graaff has done well for several years.

On the whole, the gains far exceed the losses, and I recommend the experiment to all but those who have room unlimited or limited desires in their gardens.

WHITE ROSE.

A BEAUTIFUL DOUBLE TULIP.

PREVIOUS to three years ago I must confess that the double-flowered Tulips held no charm for me. Their stunted, ragged-looking and oftentimes green-tinged flowers were to me an eyesore, and they found no place in my garden. At that time, however, a Tulip-loving friend, whose blandishments are second only to his love for the flowers, presented me with a dozen bulbs of Murillo and persuaded me to plant them. I did so, and the next spring received the most pleasant surprise that I had experienced for many a long day. Now the thought comes that there may be others who abhor the ordinary double Tulips just as much as I still do, but who would, if they knew it, welcome Murillo with open arms. For you must know that this is no ordinary Tulip. It is true that it is an "old one," and can be bought for 10s. a dozen; but what matters that? Indeed, its cheapness is a boon to those who cannot afford to purchase the more expensive and, perhaps, aristocratic varieties that our friend Mr. Jacob loves to gloat over. Perhaps the best way to describe the blooms of Murillo is to liken them to a miniature Pæony, which, indeed, they closely resemble when fully open. Then its colour is such a delightful combination of rose flushed with white that ladies

simply rave over it. In addition, the blooms are decidedly fragrant, an attribute that perhaps some live bulb-dealer will one day credit to those few Tulips which possess it when describing them in his catalogue. Then the blooms of Murillo last so long, either on the plant or in a cut state, and it has a dwarf, sturdy habit that renders it valuable for bedding purposes or for the front of the border. What more would we desire in a Tulip? Beauty, fragrance, lasting properties and sturdiness are all there, and the bulbs can be had for 10s. a dozen! Perhaps Mr. Jacob will one day give us a list of cheap—really cheap—good single and double Tulips, and if all are as good as the subject of this note and illustration, he will call down upon his head the blessings of many readers of THE GARDEN. H.

LATE TULIPS FOR BORDERS.

THE superb beauty and stately habit of the Darwin and May-flowering Cottage Tulips attract hosts of admirers, and bulb-growers tell us

there is an increasing demand each succeeding year for the best varieties. This is not surprising, for coupled with brilliant colours, for size and substance, more particularly in the Darwin section, the May-flowering Tulips are unequalled. In habit and appearance generally they are distinct from the early-flowering Dutch varieties.

When first raised and introduced from Holland, their advance in popularity was slow, the reason for this being the feeling that, flowering in May, they were unsuitable for bedding, it not being possible to clear the beds in time for the Zonal Pelargoniums, Fuchsias and similar plants. Tulips of such exquisite beauty, however, could not be long ignored, and, from being planted in limited quantities in borders, their popularity has increased by leaps and bounds. For general bedding their late-flowering character may be somewhat of a hindrance, but this in the garden, as a whole, is a distinct advantage. Years ago, except for a few Old English Tulips and one or two species, there was a distinct break in the floral display of the borders between the bulbs of April and the flowers of June. The beautiful May-flowering Tulips have done much to bridge over this gulf.

Even if not extensively grown for garden decoration, they are worth special attention for cut-flower purposes. With stems 2 feet to 30 inches long, the Darwins especially being stiff in stem and as straight as an arrow, they are the acme of perfection among Tulips for vase decoration, both in form and lasting qualities.

In making a selection of sorts to cultivate, the grower will find a very wide range of colour at his disposal. The Darwin section includes many shades of scarlet, crimson, red, purple, pink, lilac, rose, mauve, white and glossy maroon or black. The most important colour missing from the Darwin Tulips is yellow. This and many other shades of exquisite beauty are to be found in the May-flowering Cottage Tulips. Bulb-growers, to meet

the demand for a yellow Darwin Tulip, when specially requested, supply the May-flowering Cottage variety Bouton d'Or, which in habit resembles the Darwin section.

The following twelve sorts comprise a useful and varied selection of Darwin Tulips: Clara Butt, soft pink; Europe, rosy red; Farncombe Sanders, vivid red; Glow, vermilion; La Tulipe Noire, the nearest approach to a black Tulip (this variety and Bouton d'Or, yellow, are a lovely contrast when planted in mixture); Loveliness, satiny rose; Margaret, blush to soft pink; Pride of Haarlem, rose red, the largest of the popular Darwin Tulips; Rev. H. Ewbank, a heliotrope or grey shade; Wedding Veil, white, shaded lilac; White Queen, also known as Darwin La Candeur, the best white variety; and William Pitt, deep scarlet.

Six of the best May-flowering Cottage Tulips are Bouton d'Or, rich yellow; gesneriana, scarlet crimson; La Merveille, bronzy red, fragrant; Picotee, white, edged rose; retroflexa, pale yellow, distinct, recurved petals; and vitellina, pale cream.

The cultivation of the May-flowering Tulips presents no difficulties. They are perhaps seen to the greatest advantage when planted in masses, 5 inches to 6 inches apart, in long borders as illustrated. They are also adapted for planting in association with Wallflowers, Polyanthus, Arabis and other spring-flowering plants, the two providing an almost indescribable wealth of colour. The perennial borders may be thinly planted with the bulbs either in groups of distinct varieties or in mixture, as the Tulips will not harm the permanent plants, while they will brighten up the garden considerably in early May. A. O.

SOME INTERESTING CROCUSES.

THERE are so many things in gardening that no fellow can, or ever will, understand—historically, practically and theoretically—that it almost might be called a science of surprises. It is full of all sorts of shocks, both pleasant and unpleasant.

There are two beautiful Liliun auratum. It is their second year in the ground. To-day they are the picture of health and give promise of abundant bloom. The next morning the leaves are drooping and the buds flabby and flagging. Something has happened. We say "sun-stroke," but we do not really know. This is a practical shock. We all know the sort of thing very well.

Another sort of shock is more a sad surprise than a shock. I had one the other day, or, rather, a whole series of little ones. I was looking where I could buy the species Crocus called Sieberi, Imperati, susianus, biflorus and tommasinianus. One after the other I took up my bulb lists. Pearson's? No. Hogg and Robertson's? No. Sydenham's? No. Dickson's of Belfast? No. Carter's? No. Hartlands'? No. Bath's? No. Well, surely they will be in Sutton's? No, not all of them; even there only biflorus (the Scotch Crocus) and susianus

(Cloth of Gold) When I had sufficiently recovered, I began to ask myself what all this meant. It was indeed surprising to find in this age of rock gardens and cheapness these little floral gems unlisted, and corollarily I can only presume unknown and ungrown, for nothing is more certain than that if they were not my first they would not be my second.

These beautiful little flowers would be everywhere if people only knew how easy they are to grow and how cheap to buy. Any good garden soil makes them quite happy. They flower in advance of the Dutch varieties, and are much smaller and more dainty-looking. Biflorus is a slender, delicate white, with dark-pencilled sepals. Susianus, when open, is a rich deep yellow self; when in bud it is a study in chocolate and gold. Sieberi is a fat, jolly little fellow in a pretty mauve frock. Imperati is more slender and grows taller. When fully open it is a pale mauve, but in the bud stage it looks as if it were a combination of buff and deep purple, owing to the external colouring of the perianth. Tommasinianus is silver grey outside, and almost a lavender when the flower is expanded. Its orange stigmata are striking. All these five varieties may be left undisturbed for two or three years, when, like all others, they are all the better if they are taken up, divided and replanted in fresh soil. If the seed-pods are allowed to open when they appear on the surface, it is very easy to get colonies of seedlings.

New Seedlings.—Within the last few years some Dutch firms have put some charming new florists' varieties into commerce. A few of the best and most distinct are included in the following list, all of which I can confidently recommend: Distinction, a small flower, needs thick planting to make a good effect, a mauve pink; very distinct and the nearest approach to a pink. Dorothea, soft pale lavender mauve, an exquisite shade; does very well in pots. Hero, dark shining purple; an immense flower, very late. Kathleen Parlow,

a large pure white of great substance, and set off with prominent orange anthers; exhibited in fine condition by Messrs. Bath at the Royal Horticultural Society's shows this spring. Margot, heliotrope and lavender; a striped flower of great size and substance; pretty in the bud stage; tall grower. May, the writer's favourite white, not so large and tall as other varieties, but of extra fine form; stands wind and rough weather well. Pallas, white, with lilac veinings, very large, fine orange anthers. Sir John Bright (John Bright), a good, very deep purple, enormous bloom, and valuable because of its earliness.

A Crocus which I see highly recommended in the trade lists is Harbinger, a dark purple, said to flower three weeks in advance of all Crocuses. I have not experimented with it myself, but it must be worth while giving a few a trial. A broad purple mass of Crocus in March is a delightful sight, and there is no doubt the effect might be made more lasting by a judicious mixture of varieties, say, Harbinger (if it is what it is claimed to be), John Bright, purpurea grandiflora and Hero. P. J.

THE RAISING OF BULBS FROM SEED.

SO little done, so much left to do," were the last sad words of a great man who now lies among the Matoppo Hills in South Africa, and whose life was employed in a work even more important than horticulture. But that will be my epitaph, anyway. The raising of bulbous plants from seed has its disappointments, its periods of weary, weary waiting; but in fascination it surpasses all other forms of speculative and experimental gardening as I know them. Let us first take, by way of a contrast, the case of that popular annual flower, the Sweet Pea. We do our



A BORDER OF MIXED MAY-FLOWERING TULIPS AT KEW. NOW IS THE TIME TO PLANT.

crossing, sow the seed, and in a couple of years from then we have perhaps a series of new varieties, good, bad and indifferent, principally the last two. If by a stroke of luck we are rewarded with a prize, it goes on the market, and in a couple of years more is played out; anybody may have it. How different with a bulbous plant. I have seedling Daffodils sown in my first year of hybridising, distinguished by the letter "A." The years have rolled on and I have now arrived at letter "I," and some of my "A" seedlings have not yet flowered. Seedlings of some of the Crocus species sown four or five years ago last spring showed each but one spindly leaf. My gardener said he could hardly "design" them; "discern" I think he meant.

And then, when we have at last acquired something really good in bulbous plants, oh! the time it takes to work up a stock! Among my Daffodils I have particularly noted that if at any time I have selected what has proved to be a rather *indifferent* seedling, it has multiplied after the manner of rabbits or white mice; but with the choicest things the contrary is generally the case. Among records I have made is the following: The first time I ever showed seedling Daffodils of my own raising was in a class where three varieties were required. These were duly put up and a first prize taken. Of my pet flower of the bunch, and which was undoubtedly the finest of the three, I now have three bulbs only, while the other two have run into quite substantial stocks. I do not know that this is always the case, because I had it from the raiser, that the superlative Daffodil Empire is a most prolific increaser, and I have heard of a few other fine things that increase well; but I think one may say, without any fear of contradiction, that these are only the exceptions that prove the rule.

Those going in for saving seed from bulbous plants will find the crop of seed considerably affected by the seasons. Here, for instance, we have saved a comparatively small quantity of Daffodil seed this year. Although the pods looked quite as promising as usual, they were not well filled; this, I suppose, was the result of a very dry April and May. The best crop of seed I have ever obtained from my little Irises of the *reticulata* section was in a spring when we had a warm, sunny spell just when they were all in flower. This brought out the bees in swarms, and they were very busy with the flowers when the sun was on them. The following spring was a cold and dull one, and the seed crop an almost entire failure. The de-anthering and cross-pollinating of small bulbous plants is subtle and very intricate work. I am afraid I let the former process slide in a great many instances. It has always struck me that a watchmaker would be the

man to make a hobby of it. He would be well equipped by practice and experience to do it effectually.

I am in doubt as to the preferable qualities that would go to make up a successful raiser of bulbous plants. We might take the case of a man who was capable of taking great care, infinite pains, who was never daunted by the frequent failures encountered, but kept pegging away until he had successfully effected the different crosses he desired to make; but if he had not the eye and the right taste in *selecting* his things when he had

and at no time is it so bright and well defined as in Heroine. Take away the colour from Albatross, and I would then much prefer Seagull. Take away the beautiful red edge from Heroine, and then most of its value would be gone. But it never varies, and herein is its superiority to Albatross most chiefly shown. At present it is expensive, but as it is a good doer on all but very heavy, cold soils, it will doubtless soon be offered at a lower figure. Many who would like to own a bulb will welcome that happy time and hope that it will not be long delayed. POETICUS.



NARCISSUS HEROINE, AS SHOWN BY MESSRS. PEARSON AND SONS OF LOWDHAM AT THE BIRMINGHAM SHOW.

flowered them, of what avail would all his labour be? A combination of all the qualities I have named would be ideal.

Rye.

F. HERBERT CHAPMAN.

A GOOD NEW DAFFODIL.

NARCISSUS HEROINE is one of the specialities of the firm of Messrs. J. R. Pearson and Sons of Lowdham. It is a singularly attractive flower, and the writer can well remember its first appearance on their stand at Birmingham about three or four years back. The catalogue comparison between it and Albatross hardly does it justice. The latter flower is very fickle in its colouring,

and at no time is it so bright and well defined as in Heroine. Take away the colour from Albatross, and I would then much prefer Seagull. Take away the beautiful red edge from Heroine, and then most of its value would be gone. But it never varies, and herein is its superiority to Albatross most chiefly shown. At present it is expensive, but as it is a good doer on all but very heavy, cold soils, it will doubtless soon be offered at a lower figure. Many who would like to own a bulb will welcome that happy time and hope that it will not be long delayed. POETICUS.

COLOURED PLATE.

PLATE 1454.

BROWN AND BRONZE TULIPS.

ONE of the Tulips in the plate belongs to that particular type which is so often, but erroneously, put under the head of Darwins. The true and original strain, which was introduced twenty-two years ago by Messrs. E. H. Krelage and Son of Haarlem, were all either *byblœmens* or roses. There was not a single bizarre (that is, a flower with a yellow base) among them. It is a thousand pities that this distinction is not generally recognised, and that all yellows are not placed under the head of May-flowering or Cottage, which undoubtedly they are. Some of these Darwin-shaped yellows, like Golden Bronze, have a most distinct tone in their colouring, and one that is seldom met with in any race of flowers. We do come across some of the shades in the *Nemesias*, for example; but such browns as are found in *Clio*, *Goudvink*, *Quaintness*, *Toison d'Or* (which I fancy is the older and more correct name for Golden Bronze, unless it is Mahony, which is synonymous with *Toison d'Or*) and the "broken" *Goldmine* are very unusual.

The other flower which is figured in the coloured illustration is the exquisite *Louis XIV*. It is an aristocrat even in an aristocratic and imperial race. The rich bronzy purple of its brown-edged petals is so suggestive of refinement and restraint. It is so sure of itself. It needs no brighter hues. Both these varieties are to be found in Messrs. Barr and Sons' collection, and they very kindly supplied the flowers from which the coloured plate was prepared.

The following list of browns will be useful to those who wish to add some to their collection, and as they may wish to know something about them, I append brief descriptions.

Clio, called also *Bronze Queen* and *Biscuit*, is a fine tall plant bearing large flowers of the shade of a well-baked biscuit. There always used to be a large bed of this variety every year at Glasnevin



COTTAGE TULIPS.

"Golden Bronze" (left).

"Louis XIV." (right).



Botanic Gardens, Dublin. I do not know if it is still continued, but Sir Frederick Moore has more than once told me how greatly it was appreciated by the visitors. Under the name of Clio or Bronze Queen it may be obtained from most bulb-dealers at about half-a-crown a dozen.

Goudvink is its counterpart in "tortoiseshell." I have now a good large bed of this variety, and for a long time I was at a loss to get hold of a word to describe its peculiar reddish brown. One day a visitor exclaimed, "Why, there's a tortoiseshell-coloured one!" It has been tortoiseshell ever since, for it is more like the comb in my dressing-bag than anything else. I think Mr. Bourne of Bletchley can supply this at about half-a-guinea or 12s. 6d. a dozen. It is a very fine thing indeed.

Toison d'Or, or, as the illustration has it, Golden Bronze, is a beautiful shade of rich brown-yellow. Externally it is practically a self, but inside there is a halo of a deeper shade round the yellow base, which gradually tones down to the colour of the exterior as the top of the petals is approached. Messrs. Barr and Sons list this at 4s. 3d. per dozen. It is not very often met with in catalogues. In fact, all of these browns are a bit "out of the way."

Quaintness is, roughly speaking, a pointed-petalled Golden Bronze. It has not, however, quite such a rich look about it. It might have had a thin wash of grey, just to tone it down, as it were—a sad golden brown is the description in my note-book. It is expensive. I see it priced in the list of Messrs. A. Dickson and Son of Belfast at half-a-crown a bulb. I also see it in Messrs. Barr's.

Goldmine I have grown for many years, but my stock is still only a small one. I think I had it from Messrs. R. H. Bath of Wisbech, but I cannot see it in their 1912 list, nor can I meet with it elsewhere. It is a study of Cbameleon in brown, and has just that blotched look about it which I so frequently find suggests to my visitors a bird's egg. I do not say it is, but it might be the rectified form of Toison d'Or or Golden Bronze. My old gardener, who, if he could call a word wrong was certain to do so, would have spoken of it as a "marrigated" Golden Bronze. I hope someone has a stock of this singularly effective and, to so many, very attractive Tulip. Some of us, I feel sure, would like to know.

Louis XIV. I have already partly described. I need only add that it is a very tall grower and has immense Darwin-shaped flowers of that beautiful bronzy purple which we partly get, but in a much paler shade, in the standards of the Spanish Iris Thunderbolt. So highly do I think of this variety that I have no hesitation in giving it a place among the "great." *It is a great Tulip.* As Messrs. Barr have it, "very tall and stately and remarkably handsome." There is something about these brown and bronze Tulips that appeal to one, and the liking for them grows the more one contemplates the flowers.

JOSEPH JACOB.

CLIMATIC INFLUENCES ON HYBRIDISATION IN 1912.

TO those entering in these later days upon the work of raising new seedlings of Narcissi there cannot remain the slightest hope of emulating the splendid achievements of those who, in some cases for a generation, have devoted

themselves to the work, with results which have amazed us all. With workers such as the Rev. G. H. Engleheart, Messrs. Crosfield, P. D. and J. C. Williams, Copeland, Haydon and Backhouse, only to mention a few of the giants of the cult, already holding the field, there exists now for the new-comer only the very barest and most unlikely chance of producing new varieties at all comparable with those created by the men who

of frequent occurrence, sometimes during several successive nights. The period in question covered what is usually the time when pollinating of the Narcissus is carried out. Coupled with this state of things was a season of equally abnormal earliness in the flowering of the Narcissus, due probably to the great heat of 1911, coupled with the drought of that year and the absence of severe winter frosts, resulting in the ground still retaining an unusual warmth.

In 1911 I pollinated my first flower on April 12; in 1912, on March 24, nineteen days earlier than the preceding season. As to the results following this unusual combination of unfortuitous circumstances, it may be well, before giving the data upon which my conclusions are founded, to state generally what these conclusions are, so that the data may be considered in relation thereto. My main conclusion is that the injury resulting from



DAFFODILS NATURALISED IN THE WOODLAND AT CAPTAIN S. WALTER'S, EAST FARLEIGH, KENT.

had so very long a start. They cannot now be overtaken.

Still, there remains for all of us a minor work—one of great interest and possible use to others—the compilation of statistics connected with the varied operations of hybridising, and so accumulating data which, if collected with scientific care and accuracy, may help to build up a store of facts from which in the future the laws and abstract principles connected with the subject may be recognised. And in this connection it would seem that it may not be without use to consider the lessons taught by the climatic influences on hybridisation in the very exceptional year now closing.

First, then, to recall the climatic conditions of the early months of 1912. During March and April and a part of May a period of abnormally low temperature was experienced. Frosts, often of exceptional intensity for the time of year, were

the adverse climatic conditions sustained in the trumpet section was trivial when compared with that sustained by the Medio and Parvi varieties. The reason will be afterwards considered.

Of the trumpet varieties pollinated by me in 1911 (a fairly normal season), 30 per cent. seeded. In 1912 within a small fraction of the same percentage resulted. In detail, as examples: In 1911, Mme. de Graaff as seed parent, ten seeded out of forty-one distinct crosses made; Weardale Perfection as seed parent, not one seeded out of five distinct crosses made; Duke of Bedford as seed parent, three seeded out of three distinct crosses made; King Alfred as seed parent, one seeded out of five distinct crosses made. Pollen of had general reputation for potency, used for experiment, accounts for the failures in some cases; but the conditions were identical in this respect in 1912. In 1912, Mme. de Graaff as seed parent,

ten seeded out of thirty-nine crosses made; Wear-dale Perfection as seed parent, eight seeded out of thirteen crosses made; Duke of Bedford as seed parent, five seeded out of six crosses made; King Alfred as seed parent, four seeded out of six crosses made. And so, in the trumpet section, 1912 does not suffer by comparison with 1911, but rather the reverse.

A very different story has, however, to be told when the Medio and Parvi sections have to be dealt with. In my garden devastation reigned supreme. A few examples will serve to show the general results. In 1911, Lulworth, every bloom seeded; in 1912, not one in seven crosses made. In 1911, Will Scarlett, 50 per cent. seeded; in 1912, not one in six crosses made. In 1911, Lady M. Boscawen, every bloom seeded; in 1912, 50 per cent. only. In 1911, Southern Star, every bloom seeded; in 1912, none. In 1911, White Wings, every bloom seeded; in 1912, two out of nine. And, further, in regard to the number of seeds contained in each pod, the season of 1912 showed a marked inferiority to that of 1911. White Wings, for instance, produced in 1911 five pods which contained together no fewer than ninety seeds, an average of eighteen seeds per pod. This variety is a most prolific bearer. In 1912 the two pods gave twenty-eight seeds (six to the pollen of Warley Scarlet and twenty-two to that of Red Beacon), an average of fourteen seeds. This same percentage of decrease in number was maintained throughout most of the varieties, tending, as it would seem, to evidence a general weakening of the plants for seeding purposes, one result probably of the unfavourable climatic conditions which prevailed. Bernardino and Red Beacon I found this season to be by far the most efficacious pollen parents; also White Knight was good.

In considering the conclusions to be arrived at, the question at once presents itself: Are these various ill-results to be attributed to injury to the female (style and stigma) or to the male (anthers and pollen lobes) reproductive organs of the flower, or to both, and in what relative measure?

I think that the results achieved in the trumpet section as above stated dispose of the idea that any marked injury to the pollen had resulted

from the frosts, and that we have to look rather at the injury sustained by the pistil and style for an explanation of the disastrous results. Obviously in the trumpet section the extended perianth afforded a better protection from the frosts than was provided by the shorter and more widely-opened perianth segments of the Medio and Parvi sections, a mere matter of relative material protection from the frost, and from the sun following too quickly before the frost had disappeared.

further assured by friends who have been this year hybridising Narcissi that the damage in their Medio and Parvi sections has also been exceptionally severe.

CHARLES E. SHEA.

POET'S NARCISSI IN THE GRASS AT KEW.

THE groups and masses of Poet's Narcissi scattered about the grounds at Kew is one of the most effective features in the Gardens in spring. The bulbs are planted freely in the woodland vistas and glades, and are quite at home in the thin grass between the trees. They increase freely and flower profusely year after year. Although the soil in which the bulbs grow is light and sandy, they do remarkably well and produce flowers of good size and substance. Planted in a rich, deep soil, however, the stems will grow taller and the flowers will be larger; but such soil is not absolutely essential for success with these beautiful bulbous plants. In light soil, however, there is always a tendency on the part of the bulbs to increase too fast, and split up into a lot of small bulbs which produce only leaves the following season, but eventually they attain flowering size and bloom freely.

Early planting is recommended for these Narcissi, and the sooner they are in the ground the better after the month of August. Shallow planting must be avoided, especially in light soil, where the bulbs ought to be at least 5 inches or 6 inches below the surface. When planting in grass, the turf may be taken up; then holes may be made with an iron-shod stick or crowbar. Care must be taken that the bulbs rest on the soil at the bottom of the hole, as many failures are due to suspended bulbs in careless planting. After the bulbs are placed in the holes, fill up with fine soil, rake it all over, and then replace the turf, beating it down firmly; or the bulbs



AN EFFECTIVE GROUPING OF POET'S NARCISSI IN GRASS.

Of course, results are materially influenced by local circumstances. In my case the borders, although well protected from violent winds from north and east, are peculiarly liable to severe damp frosts, and gardens situated in more dry and high places may have shown different results; but that does not affect the conclusions arrived at under the special conditions which prevailed, and I am

may be planted with a bulb-planter, which does away with the necessity of lifting the turf. This instrument, on being pressed into the ground and withdrawn, removes a circular piece of turf and soil as deep as desired. After placing in the bulb this will fit back into the hole again. In planting, all formality and regular lines should be avoided, taking care to have irregular groups of all sizes and shapes.

The two principal sorts which are grown, and which are cheap enough for naturalising in grass, are: *N. Poeticus* variety *ornatus*, which comes into flower first of the two, has a pure white perianth with broad and well-formed segments, the eye margined with scarlet. The old Pheasant's-eye (*N. P. variety recurvus*) comes into flower after the above is well over, and forms a valuable succession of flower. It has a pure white perianth of reflexed segments, the eye of which is margined with deep orange red. Very fragrant, it is slightly taller than the earlier variety. Besides these there are many other desirable varieties, while the hybrids of this group include many beautiful forms. W. I

NARCISSUS PALLIDUS PRÆCOX FOR NATURAL EFFECTS.

Owing to the fact that this beautiful early-flowering Daffodil has a decided tendency to deteriorate

between the Filbert trees shown in the illustration. I think you will agree with me that *N. p. præcox* is quite at home here and increases each year. I find in one case seedlings blooming some yards away from the original planting."

THE SEEDING OF DAFFODILS.

HAVING read some time ago with much interest the results of the Daffodil seed crop for the past season, published in THE GARDEN, I am sending particulars of my experience, which may be of some assistance in elucidating the curious results experienced. It will be remembered that April of

and *Parvis*. Of the trumpets about seventy per cent. took—not so bad considering the season; of the *Medios* about twenty-five per cent. took; and of the *Parvis* only about twelve per cent., I think almost in inverse ratio to the normal. I am of opinion that the whole thing is accounted for by the hot sunshine and strong wind. Where the stigma was protected to an extent, as in the trumpets, results were fairly reliable; where more exposed, as in the *Medios*, most of the pollen dried and dropped off before absorption took place; and the *Poeticus* were almost a total failure for the same reason, the stigmas being entirely unprotected from sun and wind.

Perhaps, should similar circumstances again arise, it might be well to moisten the stigmas and tie up the *Medios* and *Parvis* in a paper cone for a day or two until absorption had taken place.

As evidence of the extraordinary difficulty in fertilising during the past season is the almost



NARCISSUS PALLIDUS PRÆCOX, NATURALISED BETWEEN NUT TREES IN THE GROUNDS AT EDEN GROVE, CARLISLE.

and die out when planted for natural effect in many gardens, the accompanying illustration, together with the following letter, kindly sent us by Mr. R. Carruthers, Eden Grove, Carlisle, will be of interest. Mr. Carruthers writes: "I took to the Daffodil somewhere about 1897, and these bulbs of *N. pallidus præcox* would be planted certainly after that year. This variety of Daffodil was planted in clumps of ten or twelve bulbs, the order being given for 100 bulbs. They have had nothing done to them, and simply look after themselves. They are a source of great delight each year, brightening the days of early spring with their sulphur-coloured blooms. A colony of *N. p. præcox* at the foot of the tree of Apple King of the Pippins is a few yards away from those

this year was entirely abnormal—no rain, strong sunshine and excessive wind—with the result that all plants raced into bloom, early, midseason and late, in no sort of order, but giving the hybridist the opportunity of effecting crosses which in a normal season could not take place under natural conditions. Owing to the curious weather conditions, I took rather ample notes, and I think it is possible to assign the reason for the abnormal number of failures in the past season.

I may say that I tried no "freak" crosses; all the pollen plants had a reputation for fertility, and all the seed-bearers were of good repute. I made about one hundred and forty crosses in all, fairly evenly divided between trumpets, *Medios*

total absence of any self-fertilisation. I well remember two beds of *Emperor*, which contained between 300 and 400 bulbs. I fertilised a few flowers with pollen of *Horace* and *King Alfred*. They all produced a certain quantity of good seed, but the remainder did not produce a single pod, although left standing intentionally. The same thing happened with a quantity of *Minnie Hume*. Of those hand fertilised, about thirty per cent. took, but not a single pod was set by natural means.

Invermore, Woking. J. W. JONES.
[Mr. C. E. Shea, on page 463, gives some interesting particulars about the effects of hybridisation during the abnormal spring of this year, and attributes the failure of the *Parvis* to seed to frost.—ED.]

THE FLOWER GARDEN.

SWEET PEA NOTES.

Autumn Catalogues.—It is my intention to devote the major portion of the space at my disposal in some future issues of *THE GARDEN* to a consideration of the varieties offered in the leading specialists' lists. It is acknowledged by everyone interested in the cult of the Sweet Pea that varieties are much too numerous; but as far as I am aware no one has come forward with a really practicable suggestion as to how the state of affairs can be changed for the better. It is a small list that does not embody upwards of five dozen varieties, and some of them include nearer double than quantity. Can the tyro be otherwise than bewildered when he comes to the task of making a selection from so formidable an array of names, especially when he reads the glowing descriptions accompanying each variety?

Individual taste must, of course, mainly govern selections of all kinds of florists' flowers; but the novice who attempts such a thing in Sweet Peas will be apt to come rather a bad cropper, because there are so many varieties too closely alike to justify the inclusion of more than one of them in an ordinary collection. The publications of the National Sweet Pea Society are undoubtedly helpful, but they can scarcely be expected to give a detailed, comparative description of every variety in cultivation; hence it is wise for the uninitiated to secure the advice of an expert friend to start with.

It cannot be doubted that the seedsmen would be pleased to see their way to reduce the lists, but there are, and always will be, people who do not waver in their allegiance to old favourites, and as regularly as the seasons follow each other they ask for them, and it is obvious that the seed-merchants must be able to meet the demand. Well, perhaps we shall see a way out of the corner some fine day.

White Varieties.—When I made mention of two or three white varieties of conspicuous merit I omitted White Queen. In many cases such a lapse of memory would be of no real moment, but in this instance it is of importance, for the simple reason that this is one of the finest whites in commerce and is destined to occupy a high place in future lists. The form of the flower is excellent, the blooms are admirably set on the stem, the plant is a thoroughly good grower, and White Queen ought to have consideration from all purchasers this autumn.

A Farnham List.—Messrs Bide and Sons, Limited, Farnham, have come prominently to the fore in Sweet Peas during recent years, and they have arranged some splendid stands at the

"National," the Royal Horticultural Society and other important shows. Their present list embodies the finest standard varieties, and no novelties are included. This is just as well, unless one can be perfectly sure that the new-comer is good enough to beat any of its predecessors, and this is not an easy matter nowadays. Among the best in this catalogue are: Agnita, cream overlaid delicate lilac; it is a beautiful flower that will appeal to those who admire refinement of colour. Seamew is a splendid grower and produces plenty

of this group that run closely together and are of about equal merit. Edna Harland is another monster flower, the colour being clear, bright pink; notwithstanding its great size it is in no sense coarse; it does not, of course, stand in a class by itself. Mrs. Hardcastle Sykes is still a favourite with many cultivators and exhibitors, and it is decidedly so with Messrs. Bide and Sons, who staunchly advocate its inclusion in collections. I may be allowed one or two lines to call attention to the magnificent flowers which this firm staged at the Royal Horticultural Hall on August 13. They attracted wonderful attention, particularly a perfect vase of the showy Eric Harvey. HORACE J. WRIGHT.

THE BEST GARDEN DAFFODILS.

HOW few of the Daffodils of fifteen to twenty years ago are to be found in the lists of the present autumn! They have gone, dropped out by the wayside in the great race for garden recognition. A process of sifting has been quietly going on. Messrs. Barr and Sons' interesting list of discards has been growing longer and longer. It is only a few of the fittest that alone survive—Emperor, Empress, Barri conspicuous, Mrs. Langtry, Mr. Walter T. Ware's great Parisian find, ornatus, the old as the hills recurvus, the pretty sweet-scented yellow Jonquils and a few more that could be counted on our fingers and toes are the sole remnants of a past of "good things," "great acquisitions" and "distinct advances." The same inexorable law is still at work, and the modern creations of the hybridist must submit to it as their forbears had to do in the past.

Not every Daffodil that has been bought with gold will be among the ranks of the "great." No; far from it; the many will not be even among the "useful." *Sic transit gloria Narcissi.* In time past I went round Mr. Willie Copeland's (we never call him William, as I suppose we ought) Daffodil garden at Kibblestone Hall. "Hallo!" I said, "what have we here?" There was a label. That was all. "Oh!" he said, "it is a grave." "A grave?" "Yes, five pounds are buried there."



NARCISSUS STROBOLI, A GOOD TYPE FOR THE GARDEN.

of charming pale lavender blossoms on stout, long stems. Blue Belle, although it belongs to the now somewhat despised grandiflora group, is a real beauty and fully entitled to more attention; the name truly describes the colour of the expanded flower, which is lavender in the bud stage. Mrs. Stewart Champion, an immense cream pink, has not such a place of its own, since there are several

Brother and sister gardeners, have not we also many of these sad reminders of a too-confiding enthusiasm? Sometimes I fear considerably more than five pounds are in the ground beside what has come to be only a tombstone. Where is White Giant to-day? (White Giant was pictured in *THE GARDEN* Daffodil Number of 1911.) Ask the Brodie of Brodie; ask Mr. C. Lemesle Adams.

Mr. Pinches has invented a simple but effective label to keep away tramps—"Beware of the Lycopodium." Might he not turn his attention to an appropriate writing on the wall for the innocent dreamers who see the exquisite productions of a Williams or a Crosfield already growing in the greatest profusion in their little flower patch?

Mr. Duncan Pearson is one of the downright honest men of the world. He has been busy for the last month (August) catching salmon and trout in Norway. All I know about fishing is that there are long pauses in the sport between one naughty fish succeeding another on the hook. It gives opportunities for reflection and—! In his case, though, at those moments when there was no fish, I think I am safe in surmising there was a Daffodil on at the other end. One by one the new ones would come up for judgment. The fisherman returned home. One of his first letters was to me. Just note what he says: "Comparatively few of the newer Daffodils are any use for general garden purposes. When they are no longer of use on the exhibition table they are no use at all." I am convinced he is absolutely right, and that is what I have been leading up to all this time.

Now, arising out of the above there come the further obvious questions: How are we to know a good garden Daffodil? and which are they? Dealing with the first question, I would reply that it is impossible to tell except by the practical method of growing them ourselves. The two most important requisites are that the variety should be one worth having for its decorative effect; and, secondly, that it should be a good doer. It is in these essentials that shows are so misleading. They tell us neither about the one nor the other. Probably the greatest want in the Daffodil world of to-day is a series of systematic trials carried out in different climates, e.g., North and South, and in different soils, e.g., heavy, light and buttery, where anyone could go and see for themselves the behaviour of lesser-known varieties. It is impossible to discuss in detail all the factors that go to make a plant a good garden one. The bare mention of some must suffice; size, height, season, poise of flowers on stem, adequate foliage, conspicuity of the blooms about the leaves, burning or fading of the red colouring in the cup or eye, strength of stem, lasting qualities, power of increase, and, above all, it must have a good constitution. It must be obvious from this there will be wide differences in the garden value of the various kinds.

I now come to the second of my two original questions. Which are the ones that most nearly approximate to the ideal? Of the ancients I should say Emperor and Barri conspicuous. Among the moderns the following bid fair for fame. But as time is the supreme test of a good vintage year, so it is likewise the final arbiter of the merits of a Daffodil. I am not Father Time, and I beg readers

to remember *errare humanum est*. Taking good old Emperor as typical of a midseason bloom, I would mention as earlies Alert, Stromboli (illustrated on page 466), Duke of Bedford, Golden Spider, Silver Spur and Sir Horace Plunket among the trumpets, and Dandy Dick and Blackwell among the Medios. Then, as later flowers, Cornelia, Cygnet, Cleopatra, Mrs. Veitch and The Doctor for the Ajax section, and for the Barris and "incomps" such varieties as Solfatare, Occident, Steadfast and Amber.

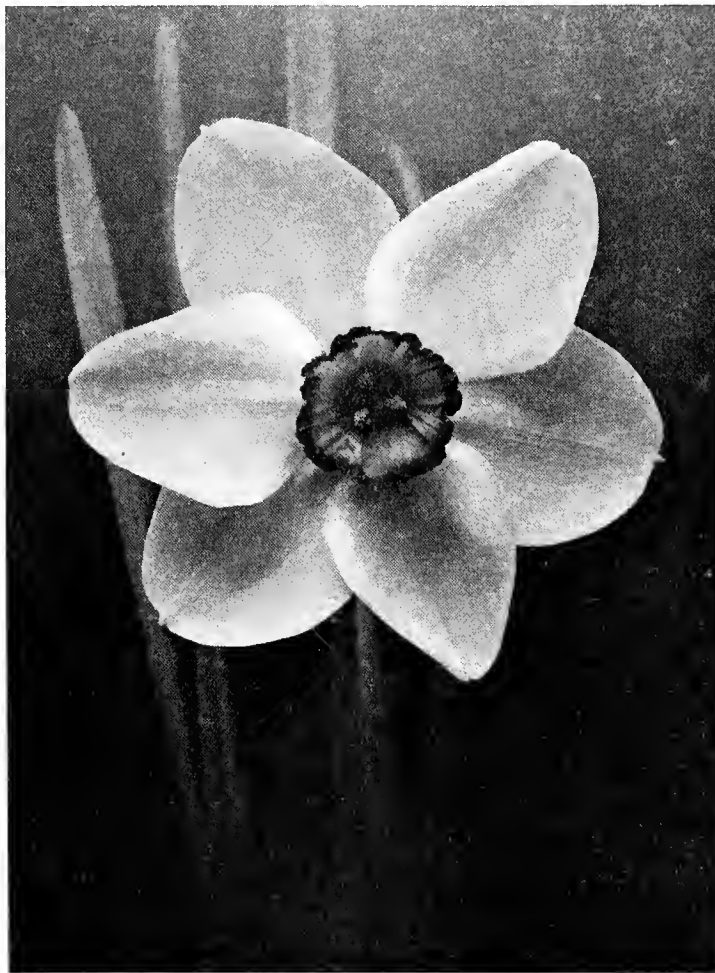
The midseason ones are more numerous. They include such magnificent flowers as Bernardino, Florence Pearson, Noble, Lady Margaret Boscawen, Hall Caine, Torch, Castile, Lucifer, Whitewell, Seagull, Coronet and Olympia. This last is a yellow

Sirdar, Mermaid and the late-flowering H. C. Bowles have left White Queen far behind as decorative plants; while among the older type with smaller cups, Evangeline, Constance, White Lady and Countess of Southesk are new varieties of great value.

The Poets I must leave alone. It is almost six to one and half-a-dozen to the other as far as garden decoration goes. I cannot make up my mind about them. I am as changeable as a weathercock. However, Horace, Cassandra, Ben Jonson and Acme are exceptions. About these I do not think I do change. Last of all we have the Poetaz. They are most useful, and I am told they are at last becoming popular. The best are Aspasia, Orient, Elvira, Irene, Jaune à Merveille and Sunset.

If my choice were limited to three, I would take the first two and the last; if to one only, then Orient. Years ago I backed my opinion by a purchase from Mr. Engleheart. It is enough, perhaps, to say I have never regretted it.

JOSEPH JACOB.



NARCISSUS AVALON, A GOOD TYPE OF AN EXHIBITION FLOWER.

Ajax of huge dimensions, with a perianth of a slightly paler shade than the trumpet. The plant is a vigorous grower and fairly free flowering. It bids fair to be a serious rival to Emperor. Of Dutch extraction, it is now found in numerous British catalogues, but it ought to be in all, just as it should be in every garden. The bulbs are as large as croquet balls. They would be worth something for decorating a shop window in bulb-time if for nothing else. I now come to the Leedsii. In no class have greater improvements been made in recent years. The "giants" are an immense acquisition to our best garden Daffodils. Such things as The Fawn, Thora, Lowdham Beauty,

NARCISSUS AVALON.

Just as Zwanenberg, that marvellous large and tall white trumpet which was shown by Mr. C. G. van Tubergen at the Daffodil exhibition in London, stands out as the garden plant of the year, so, according to my judgment and liking, does Avalon as a show flower. I have been fortunate in obtaining such an excellent likeness of it as that given on this page. When I say that the perianth is of a pure recurved white, and that the yellow eye has a well-defined rim of bright red, readers will be able to form a fairly accurate idea of what the flower is like. Naturally, one compares it at once with the now famous Challenger, which it very much resembles. After carefully weighing the merits of the two, I am disposed to say that Avalon is the more perfect flower. It is whiter in tone, even more symmetrical in shape, quite as well balanced and quite as large. It differs from the older variety in having a rather smaller centre in proportion to its size, and a rather narrower rim of red to the cup. My measurements are: Diameter of perianth, 3½ inches; diameter of cup, a bare seven-eighths of an inch; width of red edge, three-thirty-seconds of an inch. It was exhibited by Mr. A. M. Wilson of Shovell, the raiser, at the London Daffodil Show this year, and is the result of crossing Beacon (seed-bearer) with an unnamed seedling Poet. Mr. Wilson tells me that it is a tall, robust plant, and, as far as he can judge, it is likely to be a "good doer." As the bloom exhibited was, I believe, the first and only flower that it has so far produced, it is obvious that it must be two or three years before any bulbs can be offered for sale.

P. J.

THE ROCK AND WATER GARDEN.

A CROCUS FOR THE ROCK GARDEN.

AMONG the many species of early spring-flowering Crocuses, few are brighter or more pleasing than *Crocus versicolor*. The flowers, of comparatively large size, glistening white, or sometimes flushed with lavender, and veined with rich purple blue, often appear in February, and are a great delight at so chill a time of the year, the stigmata of a rich golden colour making a brilliant contrast to the segments.

As the flowers appear to open only in bright light, they are best disposed in sunny nooks about the alpine garden, where the life-giving rays of the sun (so welcome, but, alas! so fleeting at this time of the year) can fall upon them. As with most of the *Crocus* species, they are easily accommodated in our rock gardens. The ordinary gritty soil

and their beauty retained for a considerable time if a sheet of glass, larger than the group of flowers, is placed over them, supported on three bent wires, some 6 inches or 8 inches above the ground.

A reference to the issue of *THE GARDEN*, December 16, 1911, will illustrate the sort of wire supports which I find most handy for glasses up to 18 inches by 12 inches.

REGINALD A. MALBY.

THE BEST SAXIFRAGES AND HOW TO GROW THEM.

(Continued from page 449.)

Explanatory.—I find that owing to an inadvertence, my remarks in the third paragraph on page 449 are capable of more than one reading. For example, the genus *Saxifraga* is composed of many sections botanically, though it would be correct to infer that the encrusted, mosses and *Megaseas* do include a larger proportion of species and varieties of greater garden value than the rest. Then, again, it should have been made quite clear that *apiculata*, *rocheli-*

"flat rockery" they are unequalled as carpeters of the soil, and because of a disposition devoid of all fastidiousness. In the sheltered or shaded border, where the best Lilies should find a place, these Mossy Saxifrages might be employed with advantage—anywhere, indeed, where space permitted of an unfettered growth, so that their sheets of blossoms, whether of white or pink or crimson, should be of the picture-making order. Culturally, there are no difficulties in the way, since in autumn or spring the plants may be pulled to pieces and pricked out over any required area of ground.

Among the best of the older sorts are *caespitosa* (white), *Camposii* (also known as Wallacei, whose big snowy bells appeal to all), *hirta*, *densa*, *Whitlavii* (white-flowered and unusually compact), with *palmata*, which is the giant of the set and a handsome plant to boot. Of the earlier coloured sorts, *Rhei* (pink), *R. superba* (pink), Guildford Seedling (crimson) and the compact-growing muscoides *atropurpurea* are the best; while of more recent varieties, Red Admiral, R. W. Hosier, H. S. Stokes, Bakeri and bathoniensis are the best of the red-flowered set, with Miss Willmott, Lady Deane, Lady Northcliffe and *Arkwrightii* (white-flowered, or with a slight suffusion of colour on opening). These recent novelties are characterised by exceptional vigour, and, attaining to 1 foot high, are valuable as border plants. All are of the easiest culture. E. H. JENKINS.

(To be continued.)

THE MOUNTAIN AVENS.

THERE are, generally speaking, two kinds of *Dryas*. One is *D. octopetala*, the Mountain Avens, which has beautiful large white flowers with golden centres, which adorns the rocks of our Alps and high European mountains, and which extends its area to the Arctic regions of Asia and North America. It is a dwarf plant, creeping over the soil, and is covered with evergreen, beautiful dentate leaves, deep and shiny green on the upper surface, greyish underneath, and it sometimes covers large places on sunny hills or on stony moraines. We have here at Floraire one single plant, so broad and flat that it covers a space of six square feet! The big white



CROCUS VERSICOLOR, A BEAUTIFUL SPECIES TO PLANT IN THE ROCK GARDEN NOW.

thereof, if further lightened with some well-decayed leaf-soil, seems to suit them admirably, especially if the corms are planted about four inches deep and surrounded by some sharp sand.

It is frequently recommended to plant them much nearer the surface, and while this may be advisable in less well-drained soil than that usually found in the alpine garden, I find it much safer to put them deeper, as there is then less risk of injury in planting other things near them; and when one has a small garden one cannot always devote a special spot to such plants alone, often finding it necessary, and indeed desirable, to mask the otherwise bare patch left by the dormant bulbs later in the season with some other, though more surface-rooting plant, which also serves the double purpose of decorating their site in summer and providing a carpet of foliage through which the welcome flowers may emerge at their flowering-time.

If, as not infrequently happens, we are favoured with a spell of rough weather just as the blossoms are about to open, much damage can be avoided

ana, *sancta* and *scardica obtusa*—all indispensables of a great race—are not of the encrusted set. They embrace with utility a beauty and charm, however, that appeals to all; hence, for convenience, their inclusion with the "best."

Mossy Saxifrages.—These are evergreen, and are characterised by dense cushions of, for the most part, pale green foliage, and, afforded a certain degree of root moisture—some, indeed, are virtually sub-aquatic—or a cool rooting medium in moderately good soil, grow with considerable freedom and great ease. At home in border soil of ordinary richness, or growing freely in the cool, sequestered places of the rock garden, or in others where a liberal root-run is ensured them, they should never be planted on dry banks, where the soil is not only meagre, but poor, or in other positions where in summer-time they would be likely to suffer from heat or drought. As edgings of an informal character to borders of bold herbaceous subjects, in handsome groups on the slightly-raised rockery border, or in spreading masses on the so-called

flowers please us from the beginning of May till the end of November. It likes poor and stony soil and a sunny position, and may be increased by cuttings, layers, or seeds, which it gives in abundance. The other is the yellow-flowered one (*D. Drummondii*), an American species growing all over the North American mountains to the North of Canada; the leaves are greyish green, less deeply cut, and the flowers smaller, nodding and yellow. But two other species are known. One is the American *D. tenella* or *integrifolia*, coming from Gröenland, and has very small, uncut or less dentate leaves and smaller flowers. The other is a Tyrolean plant, growing in the Dolomites, and is called *D. lanata* or *vestita*. Its leaves are smaller, less deeply dentate, and white on both sides; its flowers smaller and more abundant than those of *D. octopetala*. *D. lanata* always bears a mass of flowers. It is much dwarfier than the type, and is the best for the wall garden or for sunny places in the rockery.

Floraire, near Geneva.

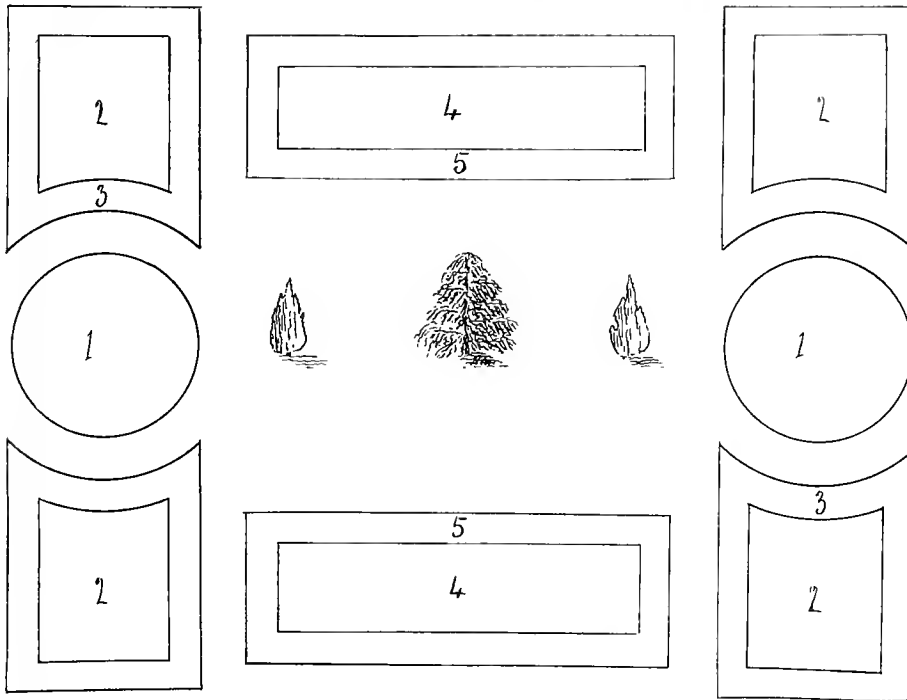
H. CORREYON.

GARDENING FOR BEGINNERS.

BEAUTIFUL BEDS OF BULBS.

ONCE more the season has come when lovers of bulbous flowers will be very busy ordering. From No. 1 to No. 5 the designs show a very simple but effective arrangement of bulb-borders for a

own tastes. Nos. 1 1, all crimson Hyacinths; Nos. 2 2 2 2, white Hyacinths. The four corner beds, Nos. 3 3, edged with blue Hyacinths, King of the Blues being a suitable variety. Nos. 4 4, Tulip Keizerskroon, and Nos. 5 5, edgings of Tulip White Joost van Vondel. If white La Grandesse and crimson Roi des Belges Hyacinths are planted in the other beds with King of the Blues, all the bulbs will be in full flower at the same time and make a brilliant display. The pointed border, Nos. 6 to 9, is one that often has to be filled at the end of a shrubby bed, and it may be planted as follows with May-flowering Tulips: No. 6, elegans, scarlet; No. 7, White Swan; No. 8, The Fawn, flushed pink; and No. 9, Picotee, white, crimson edge. No. 10, double Tulips: Toreador, scarlet, terra-cotta edge; No. 11, The Queen, white, yellow base. A round bed is suitable for any position. The other large bed is well adapted for corners of lawns or for lawns of irregular shape. No. 12 may be filled with Tulip Keizerskroon, and No. 13 with Tulip White Joost van Vondel. Long, narrow borders are also numerous. They are often formed near paths, and rows of distinct colours look well in such. No. 14, Hyacinths: Grand Maître, medium blue; No. 15, gigantea, pink blush; No. 16, L'Innocence, white; and No. 17, King of the Blues, deep blue. Another narrow border, such as the one shown, Nos. 18 and 19, may be planted with Jonquils, Campenelle in the centre, yellow; and No. 19 the Silver Jonquil, which has silvery white flowers. G. G.



1.—PLANS FOR FORMAL BEDS OF BULBS.

the bulbs, preparing the soil and deciding as to the various designs which shall be carried out. Heavy, firm bulbs, consistent with size, are the best. They generally bear one main spike in the case of Hyacinths, and keep fresh for a considerable time when in flower. Very large bulbs of Narcissi, Snowdrops and a few others produce more than one stem of flowers, so that due allowance must be made as regards the distance apart at planting-time. If Narcissi are very much crowded, the foliage and flowers will need very careful staking to prevent them falling apart and lying on the soil.

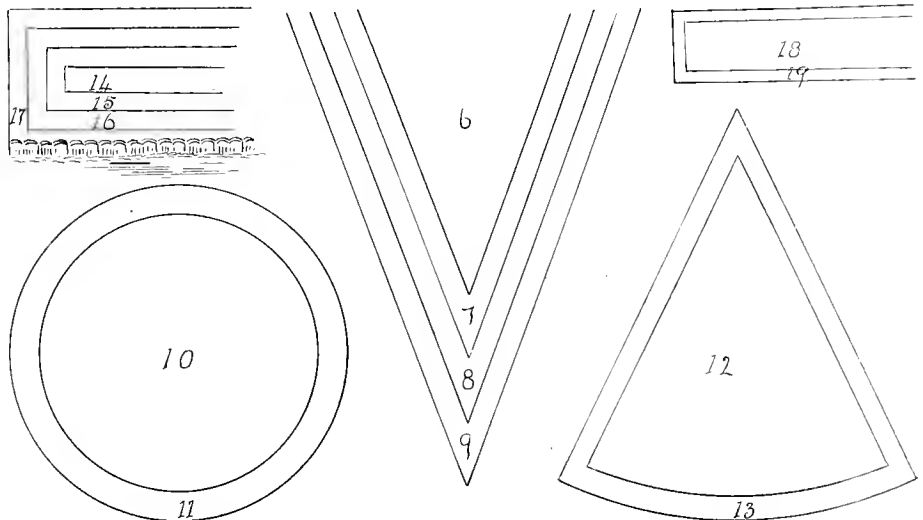
Preparing the Soil.—A deep, sandy loam is the best for bulbs to grow in. Where such obtains, very little preparation is needed beyond the deep digging of the soil and the addition to it of some well-rotted manure. If it is of a clayey or retentive nature, deep digging is advisable, also a slight raising of the beds. Where old potting compost is available, some of it should be mixed with the original soil, and road grit freely incorporated with it also improves the whole as a rooting medium for bulbs. Fresh manure must never be used. Even if the soil is poor in quality it would be better to be content to deeply work it and not put any manure in. All suitable manure must be well mixed with the soil a little below the layer of soil in which the bulbs will be planted, so that the roots of the latter will come into contact with it later on and at a stage of growth when some stimulating food is required.

The Plans and the Planting.—Any of the plans may be utilised separately, if necessary, where only one bed is required to be planted with bulbs.

small or medium-sized garden. The arrangement is a formal one, and bulbs only are to be planted (not bulbs and other kinds of plants associated; a set of such borders will be given in due course), so that they will be quite in keeping. Bold planting is the best. Mixed colours may be used in a bed, but each bed or portion of it planted with separate distinct colours looks the most pleasing. The following are given as examples, but readers may vary them, of course, to suit their

AUTUMN TREATMENT OF PRIMULA SINENSIS.

UNTIL a few years ago, I, in common with many other cultivators of these pretty winter and spring flowering plants, thought that a rather high temperature was necessary in order to grow them really well. A high temperature is not needed. I have had plants in a greenhouse covered with sheets of paper during severe frosts, and have seen water frozen on the paper, but the plants were not damaged in the least. B.



2.—PLANS FOR CORNER AND NARROW BEDS ON LAWNS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

The Herbaceous Borders.—Every effort should be made to maintain these in as attractive a manner as possible by removing the growths of the earlier-flowering subjects, not entirely to the ground, but shortening back and thinning where necessary, so that they do not hide the more showy plants. Attend to the proper supporting of autumn-flowering Chrysanthemums, Asters (Michaelmas Daisies) and the taller-growing plants, such as Eupatorium purpureum, Artemisia lactiflora (a good plant), Rudbeckia nitida, R. Herbstone, Helianthemum autumnale superbum, Solidago and others.

Gypsophila paniculata.—It may not be generally known that if the inflorescences of this plant (particularly the single one in question) are cut when dry, they may be used the winter through with good effect associated with the many varieties of Everlasting Flowers. These and the varieties of ornamental Grasses should be cut and bunched, and suspended head downwards to dry before the advent of bad weather.

Michaelmas Daisies.—Never have I seen these, and particularly the border devoted to them entirely, look better at this season of the year. The weather has evidently suited them, and the plants are particularly healthy and free from mildew. Should signs of this pest appear, however, spray with a suitable insecticide.

Agapanthus.—These are generally cultivated in pots, and they are especially beautiful when in flower for standing on terraces or near the entrance to the house. If the stock permits, a plant may be tried out of doors, selecting a warm, open position, and give plenty of good loam and decayed manure in addition.

The Rock Garden.

Hardy Cyclamen.—Any time during the next month or six weeks is the best suited for planting the hardy varieties of Cyclamen, and if to be planted on the rockery a sheltered site should be chosen for them, so that the flowers may be protected in the early spring. Where these grow freely under trees and become naturalised, forming large corms, they are indeed a beautiful sight. For the alpine-house they may be potted now in pots or pans, well drained, using a compost of fibrous loam, with plenty of leaf-mould and a little peat incorporated, and coarse road grit. Avoid deep planting, plunge the pots or pans up to the rims in ashes, and shield from heavy rains.

Iris.—The early-flowering species, such as *I. bakeriana*, *Danfordia*, the varieties of *I. pumila*, *I. histrio* and *I. histrioides major*, should be planted as soon as possible, choosing for them well-drained positions and a porous, sandy soil where the maximum amount of sunshine may reach them when in flower.

The Rose Garden.

Cuttings of many of the Roses, especially the climbing varieties, may now be made and inserted in the open ground that has been well dug and a good sprinkling of coarse sand added. These may be dibbled in, or shallow trenches taken out and the cuttings laid in, 3 inches to 4 inches apart, selecting ripened shoots and making them about eight inches long. Many of the Hybrid Perpetuals, and Teas may be increased in the same way, and will make good plants on their own roots.

Plants Under Glass.

Cinerarias.—Excepting, perhaps, for a day or two after potting, when they may be kept rather closer and shaded, this plant enjoys plenty of air and shade from bright sunshine, and if a cool treatment is afforded, sturdy plants will result that will flower well. When firmly established, they will grow remarkably well if stood on boards or battens under a north wall. The Cineraria is liable to attacks of aphid, which will, if allowed to go on unchecked, quickly disfigure the plants. Water, especially to newly-potted plants, needs to be carefully applied. Keep the plants well syringed and the surroundings moist, especially during warm weather. Avoid overcrowding, and apply a dusting of soot round about the base of the plants, which will help to ward off slugs.

Bulbs in Bowls.—The practice of growing bulbs in fibre has immensely increased in popularity, and the method has much to recommend it, particularly as the whole of the growth can be watched, and from beginning to end the system is cleanly in working. The early-flowering subjects, such as Paper-White Narcissus, Roman Hyacinths, early Daffodils that force with ease and the Duc Van Thol Tulips, should be placed in the fibre at once. Put some large pieces of good charcoal in the bottom; then sufficient fibre for the bulbs to rest upon, so that the tops are within an inch of the rim. Place closely together and fill in firmly with more fibre, just covering over the bulbs. Give a good watering with a rosed can and place away in a cool, dark place until growth has commenced and plenty of roots have formed, when they can be brought out into the rooms, avoiding too bright a position for a day or two.

Fruits Under Glass.

Late Melons.—The weather of late has been most unfavourable for the growth of these. To be successful artificial heat is necessary, and damping down, accordingly, must be attended to, otherwise red spider will be almost sure to attack the foliage. Syringing in dull weather must not be too heavy, otherwise the foliage will become weakened. Air should be admitted, if only for an hour or so, on all favourable occasions, and, when the fruits are swelling, close the house early in the afternoon and take advantage of the solar rays. See that the border does not suffer for the want of water, and give periodical applications of manure-water. When the fruits attain sufficient size, attend to their support by means of nets, thin square boards or other device. By all means have the roof glass outside thoroughly clean, so that the maximum amount of light can reach them.

Earliest Vines.—The earliest-forced Vines that were started prior to the New Year will by now have ripened sufficiently to admit of the shortening back of the wood, which will allow the basal buds to plump up and become better ripened. Where plants have to be accommodated, this is also a great advantage, as it prevents them becoming drawn, and, providing it is not done too early, no harm will accrue. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Carnations.—The planting of beds should be no longer delayed, in order that the plants may be properly established before winter. It is as great a mistake to plant outdoor Carnations deeply as it is to pot them deeply. Place a short stick to the stronger plants, which will prevent them from being twisted about by high winds. A portion should be potted to make up blanks and to plant in groups in mixed borders in early spring. If strong plants, they will each require a 4-inch pot to do them justice. Place the plants where they can be protected from rain, moisture being the means of loss beyond anything else, unless it be rats, which are extremely fond of the plants.

Asters.—The tall species may now or soon be spread out to fill up spaces in front of them made by earlier-flowering plants. Such as *linifolia* (acris), many kinds of *Novi-Belgi*, *Beauty of Colwall*, *amethystinus* and other loose-habited kinds conform splendidly to this treatment, and they look very much better than tightly tied to sticks, however necessary these may be.

The Rock Garden.

Planting.—Any plants to be introduced before winter should be put in without delay, in order that the new roots may obtain a grip of the soil before winter sets in. There is no doubt that a plant established in autumn has a tremendous advantage over one reserved till spring, in some cases the latter not blooming till a year has passed, the Eastern *Meconopsis Wallichii* and *M. integrifolia*, for instance. Early-flowering Primulas should also be planted at once.

Gentiana.—One of the prettiest flowers at this season is *G. Pneumonanthe alba*, which is much to be preferred to the type, one of the rare

instances where a blue-flowered species is less charming than a white derivative. Though common, *G. acaulis* is perhaps unapproached by any other when massed. If left to grow too thick, it, however, fails to flower freely, and every few years should be lifted, divided into small clumps and be replanted a few inches apart. It does best in heavy soil, but with the aid of rotted manure and making the soil very firm it seems to succeed under very opposite conditions. Sunshine is essential at the flowering period.

The Plant-Houses.

Dutch Bulbs.—A batch of Tulips and Hyacinths for early flowering should be potted forthwith, well watered and stood in a cold frame till wanted. The whole of the Narcissi not yet in pots should be potted without further delay. *Telamonius plenus* does very well in 5-inch pots, as many bulbs as can be got in; but the stronger-growing *Sir Watkin*, *Emperor* and others of that type give the best results when 7-inch or 8-inch pots are used, also grouping the bulbs close together. Moisture is essential, and means should be taken to ensure that the soil never becomes dry.

Begonias.—Tuberous varieties in greenhouses are apt to go off at the base of the growths when a spell of cold weather sets in. Careful watering, with a circulation of slightly-warmed air during wet and cold weather, delays the stoppage of growth. Such plants should be stored away in a cool frost-proof place for the winter and not be watered. Plants of *B. Gloire de Lorraine* to flower next month and later must now be permitted to grow unchecked. If there are too many weak shoots in the body of the plants, thin them out to the stronges, and there will be a more extended and a superior lot of bloom. Weak manure-water is a great help, and an occasional vaporising with nicotine is imperative to keep down mite.

The Vegetable Garden.

Onions.—In many instances the crop is ready to lift, it being better to harvest the crop before the foliage has quite decayed than to leave it to be excited to renewed root action by autumnal rains. If there is no means of drying on the ground, the bulbs should be spread out on wooden trellises, or on coarse wire-netting raised above the ground, and left till the bulbs are quite hard, the foliage being removed as it becomes matured.

Celery.—An opportunity may be taken to tie all the advanced heads with a piece of soft bast, breaking off any root growths at the same time. This saves trouble later, when it is difficult sometimes to get weather suitable for working the trenches. If needed, some more may have earth placed about the plants, though there is no need to apply as much as is essential later. Make it rather firm to keep it from becoming sodden with heavy rains.

Parsley.—Lift plants that have been transplanted and grown singly throughout the summer, placing them where they cannot be damaged by intense frost. A late Peach-house suits very well, the plants being put on the surface of the border, and soil or leaf-mould placed about the roots so as to keep them moist and partially active through the winter months. Choose small plants rather than large ones.

The Fruit Garden.

Vines.—Those which are now clear of bunches should be, as far as possible, freed from all parasitic insects. Syringing, or, better still, spraying with hot water often repeated is good. Vaporising with nicotine is also a valuable aid, but hydrocyanic acid is probably the best insect dispeller at the command of the grower. If the ventilators are kept closed twelve hours or so subsequent to the application, 10z. of cyanide of potassium, 20z. of sulphuric acid and 40z. or more of water will be effective, and is harmless to the foliage.

Strawberries.—The planting of a new quarter should be gone on with, lifting the runners, if they have not been previously laid in, with nice little balls of soil, scattering a little fruit manure at each station to be mixed with the earth in planting, and if the soil is in good condition, firming it about the roots. Hoe the ground nicely after planting is finished. Those planted six or seven weeks ago should have all runners removed, the ground hoed, and a half-inch layer of rotted manure and soot spread evenly over all the bed.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE FRUIT GARDEN.

APPLE PADNALL SEEDLING.

THIS new culinary Apple was briefly referred to on page 455 of our issue for last week. Since seeing the fruits exhibited at the Royal Horticultural Society's meeting on the 27th ult., when it gained an award of merit, we have visited Padnall Hall, Chadwell Heath, and through the courtesy of Mr. Roberts, who owns the Apple, have seen the trees whence the fruits were gathered. The original tree stands some twenty feet high, and was carrying a very heavy crop of fruit. Several young trees which have been grafted on the Paradise stock were bearing some exceptionally large fruits, and it is evidently a very free cropper. Mr. Roberts informed us that fruits can be used the first week in July, and are in season from then onwards until mid-September. The flesh is firm and of brisk flavour, and the fruits cook exceptionally well. The leafage is very large, and both this and the habit remind us very much of Peasgood's Nonsuch. The fruits, however, are nothing like those of that variety, but to some extent resemble Warner's King.

and warmer soils than yours they are frequently planted in September or October, and give little or no trouble. The Scabious, of course, is different, and though savouring of the perennial, with protection is insufficiently hardy for general purposes when left in the open, hence is much best if treated as an annual and sown in spring. If you desire to retain the Antirrhinums in the border, the plants should not be cut down, but merely shortened back and given a mulch of ashes, fibre, or light litter about the base. Delphiniums, Pyrethrums and Potentillas are perfectly hardy without protection, though a mulch of litter to the border would do good. The Sweet William would be best treated as a hardy biennial, sowing seeds in May and June and transplanting the seedlings each year in September or October.

ROSE GARDEN.

CRIMSON ROSES FOR BEDDING (E. A. Z.).—We think you could not do better than plant General Jacquemont as the Hybrid Perpetual variety, and General Macarthur as the Hybrid Tea. We do not consider the colours of Gustav Gruerwald and Lyon Rose would clash.

POT ROSES IN COLD FRAME (E. A. Z.).—It would have been better had you kept the plants nearer the glass; but you could prevent them being spindly by putting three or four sticks around the side of the pots and tying the growths to them. You can then bend the shoots out to any desired shape, and this will encourage basal eyes to start out.

MALFORMED ROSE-BUDS (Mary Mazze).—The buds seem to be those of a hard opening variety. Unfortunately, many Roses that expand freely in France are totally unfitted for our climate. We would advise you to adhere more to British-grown plants, and also to varieties raised in England or Ireland. Of course, we are indebted to our

common agricultural treacle, stir well and add ten gallons of water. The wash will then be ready to use.

GOOSEBERRIES (D. S.).—The Gooseberries are attacked by one of the rust fungi. These fungi have a rather curious life-history, for the spores which occur on the Gooseberry germinate and attack only Sedges. There is little good in spraying, but if the Sedges could be destroyed during the summer there would be no chance of the spores, which the fungus produces on them, being able to attack the Gooseberry in the spring. The most practical remedy would be to pick off and burn all the diseased Gooseberries as soon as the attack appears, and the leaves as well. The trouble is not usually a serious one.

MILDEW ON STRAWBERRIES (W. C.).—It is hopeless, we think, to try to free the plants so badly mildewed as are the sample leaves sent. The best way is to grub the plants up and plant fresh ones as soon as possible on well-manured and trenched land some distance away. Secure the strongest young plants you can get (and be sure they are free of mildew to start with). You will then have a heavy crop of fine-quality fruit next year. The only effective way of dealing with mildew on Strawberry plants is to watch closely for its first appearance in early spring, and then kill it with sulphur. If this is neglected until it has spread over most of the leaves, it is practically impossible to save the plants or the crops.

KITCHEN GARDEN.

TOMATOES SPLITTING (T. E. W.).—The splitting of Tomatoes is due to a sudden intake of water after a check. A plentiful supply of potash, which may be added in the water used for watering, is an aid towards checking the trouble.

POTATOES AND BLACK SCAB (L. A. H., Staffs).—The Potatoes are badly attacked by black scab or tumour.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

HERB GARDEN (E. M. G.).—We are not sure of your requirements. You speak of a "small effective herb garden," and seeing that the culinary herbs are difficult of effective treatment, we are wondering whether, when employing the shortened phrase "herb garden," you had in mind a herbaceous garden. Please kindly say.

KEEPING DAFFODILS AND TULIPS (R. W.).—Whether these will keep for another season depends not a little upon the way they have been treated. If the bulbs have been permitted to fully develop and ripen their foliage, and then lifted and dried for a time, there is no reason why they should not be just as good in 1913 as in 1912. If, on the other hand, the bulbs were lifted in an immature or growing state, it is highly probable that, while appearing sound, no flower-buds will be formed; hence, while producing quite healthy leaf-growth, no flowers would result in the coming year. Everything depends on the treatment meted out to the plants, and of this you tell us but little. If you desire a more definite reply, you must give fuller particulars. Lilac bushes require thinning rather than pruning, that is, the removal of small superfluous shoots or branches and the suppression of all the sucker-like stems that spring so abundantly from the base of the plants. If you do this and remove all old flower-trusses, you will be doing all that is necessary. If, on the other hand, you prune the plants as you would a Rose bush, it is highly probable that you will get no flowers at all in the ensuing spring.

ANTIRRHINUMS AND SWEET WILLIAMS (H.).—We are not sure whether you are referring to the old plants of these, but, if so, we think you would be well advised to discard them and raise young stocks from seedlings or cuttings. If you were to sow seeds of the above named quite early in July thinly on a slightly raised and sheltered border, the seedlings would most likely winter well and be available for planting in February or March. In lighter

French neighbours for many lovely Roses, but our British introductions will hold their own against any from foreign parts, and as regards French-grown plants they are, unfortunately, often tainted with red rust and other fungoid diseases, which will soon spread to other Roses in the garden.

FRUIT GARDEN.

CHERRIES SPLITTING (T. S. E. M.).—The cause of the Cherries splitting is the spell of warm weather we have recently had, coming after so much rain. The air with the extra heat becomes too humid for ripe stone fruit or fruit approaching ripeness. The splitting will cease as soon as the air becomes drier.

SPRAYING APPLES (T. M. H.).—It is not at all probable, if your Cox's Orange Apple was sprayed with the caustic wash at the proper season and of the proper strength, that any of the trouble shown by the foliage or the stem is due to its effects. The branch sent was badly cankered and, indeed, dead three parts of the way through. Such shoots should be cut out and the wounds painted with lead paint or with Stockholm tar.

APPLES DROPPING (Slavertan).—Your Apples are attacked by the Codlin maggot. The best remedy for killing the larvæ of this is to spray the trees in winter with caustic alkali wash. This will kill all insect pests it may come in contact with. The best time to apply it is the first week in February. It also cleanses the trees from moss growth. The wash is poisonous and of a burning nature, and the person spraying the trees must have his clothes and hands protected. It is made as follows: Dissolve 1 lb. of commercial caustic soda and 1 lb. of crude potash in water. When both are dissolved, mix the two well together, then add three-quarters of a pound of

You must at once notify the presence of the disease to the Secretary, Board of Agriculture, Whitehall Place, S.W., and the Board will instruct you how to proceed. There is no known cure.

BROAD BEANS (L. A. T.).—The peculiar purplish spots on the foliage of the Broad Beans are due to the attack of aphids, of which you speak. Aphids excrete a peculiar sugary fluid called honey-dew, and this apparently drops upon the leaves below the point of attack, and subsequently, as a consequence, the spots develop.

ONION FAILURE (Anxious).—It was fortunate you sent with your Onion plants a quantity of the soil. It is in that we look for the failure of your Onions planted out from under glass. The soil to hand was clayey, close, hard, wet, sour, and as unfit for Onion growth as could well be. It would seem as if it had been worked a good deal during the wet winter to bring it into such a state. We cannot see what you can well do now to make matters better. The soil needs worked into it a heavy dressing of fresh-slaked lime, also wood-ashes and plenty of fibre, which seems to be specially lacking. Above all things, another year do not work ground while it is wet. Leave it until in a fairly dry condition. You may try now the effects of liming well and hoeing, but the texture of the soil is indeed bad.

CABBAGE-ROOT MAGGOT (F. P. and Torquay).—The Cabbage-root maggot, which attacks all kinds of Cabbage, Kale, Turnips, Radishes, &c., is extraordinarily prevalent this year in many parts of the country, and is an extremely difficult pest to deal with. It is the grub of a blackish, two-winged fly, rather similar in appearance to the house-fly. It lays its eggs near the Cabbage root, and sometimes upon it, in May or June, and the grubs pupate in the soil, turning to flies after a short period, there being about three, perhaps four, broods during the year.



THE NEW CULINARY APPLE PADNALL SEEDLING. (Half natural size.)

Some success has attended watering along the roots with an emulsion of carbolic acid, made by dissolving 1 lb. of hard soap in one gallon of boiling water, to which is added one pint of carbolic acid, the whole being churned with a syringe until thoroughly emulsified, and then diluted with twenty times its bulk of water. Care should be taken not to touch the plants when watering. Nitrate of soda will sometimes prevent the flies from laying their eggs, and the American growers put a piece of card close to the soil round the plants so as to prevent the fly getting near.

HERB GARDEN (E. M. G.).—The effective arrangement of a herb garden would, to some extent, be governed by space, and grouping the subjects should be the order of the day. You do not say the space which you have at disposal, which is rather important. However, assuming it to be a square, oblong, or oval plot of ground, you cannot do better than arrange so graceful a plant as the Fennel in the centre, and contrasting groups—contrasting in habit and in colour—of Rosemary on either side; or, if you prefer variety, one group of Rosemary and another of Rue, whose glaucous leafage is most effective. At extreme ends of these groups, Balm should find a place, and according to the size of your plot these might include the central batch of groups, arranging them large or small according to the space at disposal. Fronting the Fennel, on either side you might arrange Sage, which, with its great mass of purplish flowers and grey green foliage, is one of the most striking plants of the garden. This plant should dominate in the positions indicated. Horneum and Wormwood are others of effective character to be quite removed from the last by a group of Mint, while for marginal plants you may indulge as freely as you will in Pennyroyal and common and Lemon Thymes in their green or variegated forms. As you have Lavender elsewhere, we omit this, and do not include the large number of such things as Parsley, Basil, Borage and the like so usually raised from seeds, and whose use in the circumstances would be entirely at your discretion.

MISCELLANEOUS.

BOOKS ON PRUNING (L. Anderson).—We think you would find "Rose Growing Made Easy," published from these offices, one of the most useful little books on Rose growing and pruning. For fruit tree pruning you could not do better than obtain "Fruit Growing for Beginners," also from these offices. The "Century Book of Gardening" is also a fine work for the amateur.

POTTING SOIL (F. V. H.).—It is preferable to allow the soil to stand a few days after Vaporite has been used before it is employed for potting purposes. At the same time, soil may be thoroughly disinfected by heating it over a fire in any way that may suggest itself. We do not think there will be any risk in using Vaporite in the way you mention, providing the instructions supplied with it are carefully carried out.

VARIOUS QUESTIONS (F.).—1. The grubs are the young larvae of the chafer. Birds will eat them if they can be turned up for them. A dressing of Vaporite, or some similar soil fumigant, would probably drive them away. Carbon bisulphide injected into the soil would kill them. 2. The curious growths on the *Rhododendron ferruginea* are galls caused by a fungus. They should be picked off and burned, lest the spores be spread. It is scarcely worth spraying, but potassium sulphide, 1 oz. to three gallons of water, might be used if it is wished. 3. Water with a little Clay's Fertilizer or other manure should be applied at intervals.

NAMES OF FRUIT.—C. V. P. Keene.—Beurré Hardy. —J. B. F.—Apples: 1, Hollandbury; 2, Cellini; 3, Hawthornden; 4, Winter Peach; 5, Lord Derby. Pears: 1, Ne Plus Meuris; 2, Beurré Diel; 3, Louise Bonne de Jersey; 4, Beurré Hardy. —H. A. Barclay.—Williams' Bon Chrétien. —J. H. B.—Apple Colonel Vaughan. —W. H.—30, Devonshire Quarrenden; 31, Reineette Grise; 32, Hawthornden. —A. M. S.—1, Williams' Bon Chrétien; 2, Pitmaston Duchess; 3, Marie Louise d'Uccle. —S. S. G.—1, Williams' Bon Chrétien; 2, Beurré d'Amanlis; 3, Beurré Hardy; 4, Green Pear of Yar; 5, Ne Plus Meuris; 6, Louise Bonne de Jersey. —Amateur.—11, Bergamotte Espere; 12, Conference.

NAMES OF PLANTS.—T. C. C.—1, *Asplenium Nidus* (Bird's-nest Fern); 2, specimen too immature to identify; 3, *Nephtrolepis exaltata*; 4, *Asplenium bulbiferum fragilis*; 5, *Aloe* species, and 6, *Gasteria* species (cannot name these in this condition); 7, *Achimenes coccinea*. —C. Larkin.—*Araujia sericeifera* (*Physianthus albens*). —W. H., Essex.—4, *Asplenium Nidus* (Bird's-nest Fern); 5, *Scelopendrium vulgare* (Hart's-tongue Fern); 6, *Quercus Ilex* (Holly Oak); 7, *Taxus baccata* (Yew); 10, *Stachys lanata*; 11, *Tanacetum vulgare* (Tansy); 13, *Galega officinalis*; 18, *Sempervivum* species; 19, *Sempervivum prealtum*; 27, *Alovia citriodora*; 29, *Centaurea montana*; 32, *Galega officinalis* variety *alba*; the remainder were not in a suitable condition for naming. —A. E. S., Ozon.—1, *Callitriche verna* (Water Starwort); 2, *Chara fragilis*; 3, *Potamogeton crispus*; 4, *Elodea* (*Anacardis canadensis* (Canadian Pondweed)); 5, *Potamogeton pectinatus*; 6, *Ceratophyllum* species; none of these weeds is harmful to fish, but the water should not be allowed to get too full of them. Raking the weeds out is the best way of keeping them under control. —Amateur.—1, *Clerodendron feditum*; 2, *Gazaia splendens*; 3, *Verbena crinoides*; 4, *Senecio Cineraria* Dusty Miller; 5, *Trigonium* species, cannot name without flowers; 6, *Lychnis coronaria*; 7, *Kerria japonica*; 8, *Achillea* *the Pearl*; 9, *Oenothera purpurea*; 10, *Galega officinalis*.

—A. P., Glastonbury.—*Browallia viscosa*. —J. B. F.—*Berberis thunbergii*. —A. J. V.—Tree Tomato, *Cyphomandra betacea*.

BOOKS.

Alpine Flora (continued from page V. August 10 issue).—The illustrations are excellent. They are all in colour, and number 178 drawings of individual plants, reproduced water-colour drawings of the living plant growing in its native habitat. The detail is marvellous. Where all are so good it seems invidious to specify, but plate 46, *Eryngium alpinum*, is a work of art. Plate No. 7, *Aquilegia alpina*, is another delightful piece of work that gives one the idea, as no other illustration I have ever seen of it has succeeded in doing, of the exquisite beauty of this alpine gem, and one could go on picking out gems throughout the whole collection. The backgrounds employed are somewhat unusual, but they have been chosen with an artist's eye to effect and to bring out the colouring of the flower depicted, and in this they succeed admirably. One or two plates are not good, but whether this is due to the heightened colour natural to their native haunts or to deterioration from growing the plants in less congenial atmosphere here, I cannot say; but *Soldanella alpina*, Fig. 131, appears to have pink flowers, whereas I have never succeeded in getting anything else than a mauve shade of blue; and the Grass of Parnassus (*Parnassia palustris*) as illustrated has a distinct pink tinge to the petal. I have never had it any other colour than white with greenish veins. *Rosa alpina* (Fig. 61) is a much brighter shade of colour than I have ever been able to get it. All these are doubtless correct, and the difference is probably due to the fact stated. The book is worth buying for the illustrations alone. The General Introduction follows, and is divided into three parts: (1) The Native Environment of Mountain Flora; (2) The Acclimatisation and Culture of Alpines; and (3) Alpine Gardens and Rockeries. All three are exceedingly interesting and well written, the last giving short descriptions of the best known of the English alpine gardens, such as Friar Park, Henley; South Lodge, Leonardslee; Batsford Park; Warley Place; Ruby Lonsdale, and others. The remainder of the book is taken up by descriptions of the species and their best-known varieties, and this has never been done quite so satisfactorily before. Altogether the book is one that can be recommended to all interested in alpine flora. —H. E. MOLYNEUX.

SOCIETIES.

GLASGOW CENTENARY SHOW.

WITH a view to the celebration of the centenary of the Glasgow and West of Scotland Horticultural Society, the directors arranged for a special show, for which handsome prizes were offered, and arrangements were made to hold this in the hall and marquees on the Luncheon Grounds, Glasgow, on September 4, 5 and 6. The place selected proved very suitable, and as a result of the effort a show of much more than usual merit was held. On the invitation of the directors, the president and council of the Royal Horticultural Society sent a deputation to visit the show, and they awarded several special prizes. The deputation consisted of Sir D. Morris, Sir H. Veitch, Mr. H. B. May, Mr. J. Hudson and Mr. A. J. Gaskell. The show was opened by the Countess of Glasgow in a graceful manner, and Sir D. Morris spoke on behalf of the deputation. Sir John Stirling Maxwell occupied the chair. The display of plants, cut flowers, fruit and vegetables was one of great excellence, though scarcely so large as at the show of 1911, held in the grounds of the Exhibition, but considerably larger than that of 1910.

The non-competitive trade exhibits were of special value, and keen interest was displayed in the splendid exhibits shown. Messrs. James Veitch and Sons, Limited, Chelsea, sent a magnificent display of plants, showing the high quality which characterises their exhibits. It was

composed of stove, greenhouse and other plants, and included Orchids, Crotons, new hybrid *Rhododendrons*, *Streptocarpus* and many other subjects of the most modern types. Royal Horticultural Society's gold medal.

Messrs. Sutton and Sons, Reading, exhibited a very fine and effective display of vegetables, flowers, &c., of their noted strains, which well deserved the awards given of the Royal Horticultural Society's gold medal and a similar one from the Glasgow Society.

Messrs. Dobbie and Co., Edinburgh, sent a grand display of cut flowers, among which Collarette and other Dahlias, Sweet Peas, Roses and other flowers were of grand quality and effectively displayed. The Collarette Dahlias and Sweet Peas attracted much notice. Royal Horticultural Society's cup and society's gold medal.

Messrs. Webb and Sons, Wordley, Stourbridge, set up a tasteful stand of vegetables and flowers, the whole surmounted by a temple-like dome of Sweet Peas. Gold medal and silver-gilt Banksian medal.

From Messrs. Austin and MacLean, Glasgow, there came two effective displays. One of these was a capital show of stove and greenhouse plants, the other comprising vegetables, cut flowers and other produce. Gold, silver-gilt Flora and silver Banksian medals.

Messrs. Hugh Diekson, Limited, Belfast, exhibited a splendid lot of Roses of various classes, admirably grown and staged. Silver-gilt Banksian medal.

Messrs. John Forbes, Hawick, Limited, sent a large exhibit of florists' and other cut flowers and bedding plants, including Pentstemons, Phloxes, Carnations, &c.

Adjoining this was a stand of hardy flowers from Messrs. Cunningham, Fraser and Co., Comely Bank, Edinburgh, in which Phloxes were very prominent. Silver Banksian medal.

Messrs. Clibrans, Altrincham, made a special feature of vegetables and cut flowers in their fine exhibit, showing their excellent strains to advantage. Gold and silver-gilt Knightian medals.

Mr. A. Jones, Killarney, showed a group of Gladioli of the most modern types, including the dicerent late-flowering sections. Silver Banksian medal.

An effective exhibit of Pentstemons and other florists' flowers, with excellent Cauliflowers, &c., came from Messrs. Williamson, Gemmel and Co., Glasgow.

No exhibit attracted more admiration than the glorious Begonias from Messrs. Blackmore and Langdon, Bath, whose flowers were presented in grand form and of wonderful size and colour. Gold medal and the Royal Horticultural Society's cup.

Mr. John Snellic, Busby, showed early Chrysanthemums, Dahlias, &c.

One of the most beautiful and interesting exhibits was that made by Messrs. H. B. May and Sons, Edminton, who made a notable display of choice Ferns. Royal Horticultural Society's cup.

Orchids were specially well represented by an exhibit from Messrs. Sander and Sons, St. Albans, who staged a grand lot of the newest hybrids and others of the highest worth.

Carnations of the newest and best types were exhibited by Messrs. Young and Co., Hatherley, Cheltenham (silver Banksian medal), and Messrs. W. Cutbush and Sons, Highgate, London.

Messrs. Malcolm Campbell, Limited, Glasgow, set up magnificent exhibits of fruit and plants. Gold medal and Royal Horticultural Society's cup.

Mr. W. Wells, Limited, Merstham, exhibited early Chrysanthemums, &c.

Other trade exhibits included plants and flowers from Mr. William Leighton, Glasgow; flower stands from Mr. A. Edwards; cut flowers and pot plants, &c., from Mr. D. G. Purdie, Glasgow (silver-gilt Banksian medal); plants, &c., from Messrs. Pringle and Alexander, Glasgow; lawn-mowers from Messrs. Ransomes, Ipswich; horticultural requisites from Messrs. A. Cross and Sons, Glasgow, and "Gardenalities" and other firms. Several first-class certificates and awards of merit were given.

The competitive classes were of great beauty, and showed, as a whole, keen competition. Unfortunately, the pressure on our space compels a brief report only.

Cut flowers, as usual at this show, were of great excellence. Pot plants were, as a whole, good, although rather limited. Fruit was very fine indeed, especially the Grapes, and vegetables were grand. Florists' work was also good, and the decorated tables made a good show in themselves.

For the group of plants 15 feet by 10 feet, the first prize, which carried with it a Veitch Memorial Medal, went to Mr. A. Knight, Brayton, with a magnificent group of very fine plants; second, Mr. J. E. Davies, Pallathie, with smaller plants, but a highly-tasteful arrangement.

Mr. Knight was also first for a circular group of plants, Mr. Davies occupying the same position as in the preceding class.

The first prize winners in the other plant classes included Mr. Knight, Mr. Davies, Mr. J. Templeton, Richmond House, Glasgow; Mr. A. McMillan, Douglas Castle; Mr. J. Swan, Lennoxton; Mr. J. Sutherland, Lenzie; Mr. D. Halliday, Ascog, Bute; Messrs. Malcolm Campbell, Limited, Glasgow; Mr. J. Thompson, Broomfield, Giffnock; Mr. C. Pattison, Linwood, Paisley; Mr. J. Wilson, Dunlirae, Kirkintilloch; Mr. T. Nelson, Rutherglen; Mr. A. Aitchison, Kilsyth; Mr. P. Wallace, Dumbarton; Mrs. T. Carlyle, Mr. J. Orr, Mr. W. Jenkins, Mr. A. Kelly and Mr. W. Virtue.

The cut-flower classes were of surpassing interest to many, and those for Sweet Peas and Roses drew most notice. In the Sweet Pea collection class victory lay with Mr. J. Fletcher, Auchincloth, Lanarkshire, with a magnificent lot clearly ahead in a strong class. It won for him the silver Flora medal of the Royal Horticultural Society. Second, Mr. J. Paul, Drumbrugh, Killbuck.

* "Alpine Flora," by R. Correvon and P. Roberts, price 16s. Methuen and Co.

THE GARDEN.

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SEPTEMBER 21, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

*The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.*

NOTES OF THE WEEK.

Trials of Violas at Wisley.—The trial of Violas has this year been so successful, particularly in the late spring and early summer, that it has been suggested (and the Council have accepted the suggestion) that the trial should be continued in 1913 with a special view of the date of the flowering of the various varieties. Growers, amateur as well as trade, are therefore requested to send three rooted cuttings of each variety (old as well as new), so that they may be planted before the third week in October. Address by post, The Superintendent, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey.

The Double-flowered Periwinkle.—We were reminded of this little-known plant, which is the double form of the small-flowered Vinca, a few days ago when visiting the nurseries of Messrs. George Bunyard and Co. at Maidstone. It has the same trailing habit as the type, but the leaves are of a more leathery texture and more pointed. The flowers are double and resemble very closely in appearance the well-known Parma Violet. It continues to flower for several months, and would make a useful and interesting plant for the more shaded parts of the rock garden or for edging pathways.

Sedum spectabile for September Effect.—The value of this well-known garden plant for bedding effects in the early autumn does not appear to be sufficiently appreciated. Its large flat heads of rosy purple flowers, borne at a uniform height, make an admirable groundwork for tall-growing plants such as late-flowering Gladioli, and the effect when the colours are well chosen is pleasing in the extreme. Moreover, the glaucous leaves of the Sedum, even before the flowers appear, render a pleasing effect in themselves. The improved variety known as Sedum spectabile atropurpurea is likewise well adapted for late summer and autumn beds.

Two Late-flowering Roses.—Two admirable Roses that are flowering well this September and deserve to be more widely known are Joseph Hill and M. Paul Lede. Both are Hybrid Teas, and are excellent when grown in bush form. The former bears superb blooms of an apricot tint, and the latter is a delightful Rose with ochre red flowers. It is remarkable that these two varieties were not more in evidence at the recent show held by the National Rose Society. M. Paul Lede was certainly included in some of the large groups of Roses, but Joseph Hill was hardly shown at all. Yet both are capital garden Roses, and their virtues are not easily overrated.

A Beautiful Autumn Bed.—At this season of the year, when the ordinary summer bedding plants have lost their pristine beauty, it may be interesting to record a very charming bed that

we noticed a few days ago. Last autumn this bed, which is a good-sized circular one in a lawn, had a large bush of Berberis Darwinii planted in the centre, and this was surrounded by Darwin Tulips. In course of time the Berberis died; but, instead of uprooting it, the owner, in April last, sowed seeds of Canary Creeper around it, and at the end of May planted African Marigold Lemon Queen between the Tulips. The Canary Creeper had covered the dead Berberis early in the summer, and during the autumn this and the Marigolds have made a glorious combination of pale yellow.

The National Sweet Pea Society.—The London Exhibition of 1913 will be held at the Royal Horticultural Hall, Westminster, on July 17. It is hoped that a Northern Provincial Exhibition may be arranged for the second week of August, 1913. The society's annual meeting will be held this year on October 17 at the Hotel Windsor, Victoria Street, Westminster, and will be followed by a conference.

An Interesting Fuchsia.—Fuchsia macrosemina and its various varieties form a group of showy shrubs during late summer and early autumn, for they bloom with the greatest freedom and continue in flower for a long while. In the South and West Counties they are familiar as bushes 6 feet to 8 feet high and as far through, but in the Midlands and North it is usual to treat them as herbaceous plants, cutting them to the ground each spring and relying on young shoots to produce the flowers. In this way good bushy plants 3 feet or so in height may be obtained, which are equally effective whether grouped in the shrubbery or planted in beds. No elaborate cultural details are necessary for the successful growth of these plants, for planted in any ordinary garden soil they succeed admirably, while a stock of plants is easily raised from cuttings.

Dahlia Kaiserin Augusta Victoria.—For garden decoration and cut-flower purposes this is one of the best Dahlias grown. The flowers are moderate in size, double and pure white. They are borne on stiff stems well above the foliage, the plants continuing to produce a profusion of blossoms till checked by frost. Being about three feet in height, it is particularly valuable for small gardens. Several excellent examples of the value of this Dahlia for massing may be seen at Kew, one bed in particular near the Cypress collection containing some two hundred and fifty plants. It belongs to the section styled the double decorative bedding varieties. As the name suggests, Kaiserin Augusta Victoria is of German origin, it being extensively grown as a commercial variety for wreaths and crosses. Unfortunately, one of the newer Paeony-flowered varieties also bears the name Kaiserin Augusta Victoria, which may cause confusion.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose Sunburst.—I should like to have the opinion of others who have grown this Rose as to what they really think of it. I got two plants of it from the raisers, and have been very disappointed with it. It is a nice grower and a good-shaped flower, but my plants have never given me a flower approaching the colour described in the catalogue. When you look down among the petals you do certainly find a good colour, but it never shows naturally. To all appearances it is an inferior Mrs. Aaron Ward. Perhaps the season may have been against it, or it may need growing under glass in order to get it good; but as an outdoor Rose, so far, I have found it most disappointing. What is the opinion of other growers?—G. T. W. (See "Autumn Roses in London," p. 476.)

Early Chrysanthemum Crimson Polly.—If Crimson Polly retains its colour as shown at the Glasgow Show by Messrs. W. Wells, Limited, Merstham, it is likely to be one of the most popular of the early Chrysanthemums of the day. In Northern gardens Polly comes rather too yellow to please many, but Crimson Polly is not a flower which should lose its colouring in the Northern climate. It is of the colour called "crimson" in Chrysanthemum parlance, and is in every way a counterpart of Polly, except in the matter of colour. Mr. Wells, who is responsible for this fine variety, anticipates that it will be one of the most popular of these early Chrysanthemums, and its appearance thoroughly supports his forecast of its future. It was well shown at Glasgow, and attracted a good deal of notice among the many growers in that district, where the early Chrysanthemum is so justly popular.—S. A.

Success with Autumn-sown Sweet Peas.—Perhaps it may interest you to hear of the success of my autumn-sown Sweet Peas, especially as I attribute it in great measure to the advice given in the columns of THE GARDEN. They were raised in boxes in the open air, and planted out in their permanent quarters in a low-lying situation under a west wall the first week in January. They nearly all survived the severe frost which soon followed, and I cut the first blooms from them on May 29. Since then, up to the present time, they have flowered luxuriantly. For weeks I only allowed them to have threes and fours, and I cut quite a charming bouquet from them only last Saturday. They have been rigorously heed and fed on Plantoids, but not once watered, although the spring drought was exceptionally severe here. The seed was from Mr. W. J. Unwin. Every one germinated and came true to colour. I have grown them *entirely* myself, for this is a large place with only one gardener, who has no time to help me. I hope, by means of liberally manuring the ground, to be able to grow Sweet Peas in the same place again next year.—BURTON, *Sutton-at-Hone, Kent.*

Woolly Aphis on Auriculas.—Referring to the reply to "J. E." on Auriculas and woolly aphis, page 455, September 7, I should like to make a few remarks on the same. Judging by my own experience, if the aphides are cleared off as much as possible at repotting-time, and subsequently kept away from the surface of the soil, and especially from the collar of the plant, I have not found that they have to any extent seriously affected the health of the plant. The late Rev. F. D. Horner said: "It (the woolly aphis) is hardly likely that

it is there for any honest purpose, and yet we cannot say that it affects the general health of the plant." A pinch of Tobacco powder will keep the aphids at bay from the collar, and also from the young roots that show on the surface of the soil. Personally, I do not use the Tobacco powder, but have made several blowpipes from pieces of Bamboo cane, which I keep handy in my Auricula frames. These I use to blow off the aphides as soon as I see them. I have found this effectual for the purpose, and have not seen reason to change my practice. Our principal local grower, Charles Winn, Esq., of Selly Hill, has a very good grower in his head-gardener, Mr. T. Shepherd, who gave me a surprise a year or two ago by telling me that he used methylated spirit to rid his plants of the aphids, and that no injury to the plants accrued from its use. He said that in bad cases he had actually washed the roots in the spirit, and then put the plant on the potting-bench till dry, when he straightway potted it up. I have not tried this myself, but Mr. Shepherd has practised it for years. In repotting I use a medium stiff brush, and brush off all the aphides I can see. I am much pleased with the Auricula notes in THE GARDEN.—GEORGE J. SAVORY, *Birmingham.*

Roses with Bad Habits.—If every reader of THE GARDEN who takes more than a passing interest in growing Roses compiled a list of those varieties which he considered had bad habits, doubtless there would be unity of opinion concerning a great number; but there would also be, one feels sure, some difference of opinion about other sorts. The note by "C. B." on page 446, issue September 7, proves this point. Like "C. B.," I would absolve General Macarthur from being troublesome with mildew, but blame it for being so sparing with its flowers. In addition to the varieties branded by "P." under the above title, I will briefly mention a few more which, with us at least, have glaring faults. Ecarlate is a puny grower, and its flowers are small, petal-lacking specimens. True, it is bright and free, but, like Mrs. Tate and Betty, the flowers are so fleeting. The last two are lovely in the bud form, but they are past and gone almost before you have time to admire them. "P." mentions Mrs. S. Crawford as a bad mildewer. Yes, it is. And here are three other varieties which with us are equally bad, if at times not worse—Margaret Dickson, General Jacqueminot (otherwise so free and fragrant) and Mme. J. Grolez, added to which the latter is none too vigorous in growth. *Farbenkönigin* is also badly addicted to attacks of mildew. Marie Deleselle changes to a rather disappointing shade of colour; so does La France de '89; this passes to an undesirable bluish shade. The habit of growth characterised by Baroness Rothschild is bad, too besomified, or close. I think the worst offender we have for mildew in the pillar section is Una, worse than Crimson Rambler, practically all the flower-buds and stalks getting more or less tainted. But Una is worth retaining on account of its large flowers and its liberality in producing them. The Lyon we discarded because it was not sufficiently free.—C. T., *Higgate, N.*

—I am equally as astonished as "C. B." to notice that one of our correspondents condemns Rose General Macarthur for being liable to mildew. I have now grown it for several years, and have never found the least sign of mildew on it. If I had to name two Roses that were free from mildew, I should say General Macarthur and Rayon d'Or. No Rose gives more satisfaction in the garden than General Macarthur. For free growth,

abundance of flowers, splendid foliage and immunity from mildew, I hardly think it can be beaten.—G. T. W., *Bedale, Yorkshire.*

Crimson Hybrid Tea Roses.—I have read with interest the lists of Roses adversely criticised in your recent issues. Of the forty varieties, twelve are crimson-flowered, and of these eleven are crimson Hybrid Teas. Can your contributor recommend one or more crimson Roses for the garden which equal the pink Mme. Abel Chatenay in substance and constant succession of bloom? There are numerous beautiful Hybrid Perpetual crimsons, but I am at present unaware of any crimson variety that approaches many of the lighter-coloured Hybrid Teas in the constant succession of flowers.—RUBRUM. [At present we have not a crimson counterpart of Mme. Abel Chatenay among the Hybrid Teas. Liberty may perhaps be thought of by many Rose-growers to come very near to the ideal, but, unfortunately, its growth is not equal to Mme. Abel Chatenay. Leslie Holland and President Vignot are both fine novelties, and will doubtless take a leading part among our garden Roses; but at present General Macarthur seems to hold the field as the best all-round holding crimson. Laurent Carle is a superb Rose, but it lacks brilliancy. Lieutenant Chauré has been grand this year. It somewhat resembles a Hugh Dickson, with a dwarfer growth, but there is not quite the scarlet shading that we get in Hugh Dickson. It is, however, a good continuous bloomer of rather dwarf growth. Leuchtfeuer comes very near to our ideal, and Edward Mawley is a most continuous bloomer and very splendid at times, the fault being a tendency to "blue," which detracts from its general effect. I have a great opinion of Mrs. Edward Powell, but should rather try it another season before pronouncing definitely upon its merits.—DANECROFT.]

The Sporting of Californian-grown Sweet Peas.—In reference to the correspondence on this subject, pages 423 and 446, issues August 24 and September 7, there seems to be little doubt that Sweet Pea seed grown in America is not so true as that grown in this country. In many cases it appears probable that it is not so carefully and thoroughly rogued as English-grown seed; but there is another side to the question, and one of which I have seen no explanation. It is, I believe, a fact that stocks which have come perfectly true for some years on the raiser's land, when grown on other soils and under different conditions will break up in the most unexpected way. It is possible that the change of climate and soil causes sporting in the foreign seed. My own experience of Californian seed is unsatisfactory, and I find it difficult to get fixed stocks from it. At the same time, unless purchasers are willing to pay a higher price for English seed, it is difficult to see how they can be supplied with guaranteed English stocks. Take the last three seasons, 1910, 1911 and 1912; the first and last of these were exceptionally wet, and 1911 was remarkably dry. In 1910 there was practically no English seed available; in 1911 the crop, though excellent, was very short; and this year the wet weather of August has done much to destroy what would have been a splendid crop. Many English growers, in order to make sure of a sufficient supply of seed, send stocks over to California to be grown for them. It should not be impossible to grow all the seed required in this country at home, but purchasers would no doubt have to pay a slightly higher price at all times, and in exceptional seasons the fluctuations in price would be greater than at present.—T. H. DURNALL.

Roses in Town Gardens.—"A. P.," page 448, issue September 7, is quite justified in his assertion that fine Roses can be, and are, grown in the immediate suburbs of London. I have no doubt that beautiful blooms are grown in other parts, but I can testify to the fact that excellent Roses are grown in the Highgate and Finchley suburbs. At a recent show held there I saw some lovely blooms, including a bowl of the finest Mrs. John Laing I ever saw. In many gardens in that part Roses seemed to form one of the chief features.—G. G.

A Good Hardy Crinum.—In "Notes of the Week" in the issue for September 7 the reference to Crinum Powellii is very timely. In some of the gardens in and around Bournemouth, this variety and one or two others do very well indeed. The sandy soil seems to suit the plants remarkably well, favouring the necessary ripening essential to free-flowering conditions. In some rather low-lying parts, where there is constant moisture of the subsoil about four feet below the surface, these plants grow very strongly and bear large, well-coloured flowers. Just before the frosts come the surface of the soil is covered with short litter, which seems to afford the plants the needful protection.—B.

Campanula Zoysii.—It was with considerable interest that I read the note on Campanula Zoysii by "B., Weybridge," in your issue of August 10. It is pleasant to know that others find this charming little Campanula not only particularly interesting and quaint, but comparatively easy to grow. My plants have been especially attractive this year, as from the small rosettes of leaves the little flower-stalks rise some two inches to two and a-half inches high, and daintily arranged upon these are the curiously-shaped flowers. Not only are these blossoms constricted at their neck, but the flower is again almost closed at the mouth, seemingly never to open more than just sufficient to get a pencil point into it. It would be interesting to know the origin and use of this remarkable design. Here at Woodford the plant flourishes in my moraine, sending out underground runners, which cheerfully pierce their way between the stone chips, very much like a miniature version of C. Allionii. I am surprised that it thrives with your correspondent in so rich a compost as leaf-soil and loam, though the full southern exposure of which he speaks appears welcome by my plants also. My chief difficulty in growing it is to keep away the slugs and snails, to whom it appears very appetising. Possibly my midnight visitors have a special taste, but certainly I find that the flowers themselves of almost all the Campanulas are relished by them, so much so that C. isophylla (the pretty Ligurian Harebell), which is just now a charming inhabitant of my little alpine garden, forms quite a trap for them, and many may be caught therein by candle-light. The accompanying illustration gives, I think, a very fair idea of the dainty charm which this tiny Campanula displays as it shakes its pale blue bells in the August sunshine.—REGINALD A. MALBY.

FORTHCOMING EVENTS.

September 23.—National Chrysanthemum Society's Floral and Executive Committees' Meeting.

September 24.—Royal Horticultural Society's Meeting and Vegetable Show. Lecture by Mr. C. Hermann Senn on "How to Cook Some of the Root Vegetables."

THE ROSE GARDEN.

THE TWELVE BEST CLIMBING ROSES.

B EING asked the other day to name what I considered the twelve best climbing Roses, I named the following after a little hesitation. And now, after mature consideration, I still adhere to my selection. They are: 1, Mme. Alfred Carrière; 2, Climbing Caroline Testout; 3, Marie Bret; 4, Tea Rambler; 5, American Pillar; 6, Alister Stella Gray; 7, Leuchstern; 8, Morgenroth; 9, Blush Rambler; 10, Reine Olga de Wurtemberg; 11, Bouquet d'Or; 12, Thalia.

I have no doubt some, if not many, rosarians will disapprove of my selection. But I do not profess to be a rosarian, and certainly I am not an exhibitor; nor, were I to live to the age of Methuseleh, would I ever become an exhibitor.

No climber that I know, or have ever heard of, can surpass in these two characteristics the two I have placed first and second on my list. Marie Bret, No. 3, a Rose but rarely met with in English gardens, is very sweet and a fairly fragrant bloomer. It is a charming Rose, and quite a vigorous climber of a fine eoppery pink colour. The exquisite clusters of the Tea Rambler, No. 4, are well known to all Rose-lovers. The blooms are slightly fragrant, and though supposed to be only an early summer bloomer, I had two good blooms on one of my plants on August 21 of this year.

American Pillar, No. 5, so far as my experience goes, though almost scentless, begins to bloom about the middle of June, and was still in profuse and lovely bloom with me in the middle of July. Its bloom is so large and attractive, and produced in such grand clusters, that I have almost wished to give it a higher place in my list than No. 5, as its foliage is also so very good, and it is such a strong, vigorous climber.



CAMPANULA ZOYSII, A CURIOUS AUTUMN-FLOWERING SPECIES FOR THE ROCK GARDEN.

Yet I very much doubt if any exhibitor or rosarian is more fond of Roses than I am. And in a humble way, for my own delight and the pleasure of my friends, I can show a lot of really good Roses. My pergola in early summer is a glorious sight, and my espalier even now—in spite of wind and weather—is "a thing of beauty." I do not in the least care whether my Rose is of exhibition form, size and "petalage"—if I may be permitted to coin a term—but I do expect it to be, as I have said, "a thing of beauty" for the ordinary eye, and I do want it, if possible, to be a pleasure to the ordinary nasal organ. The longer any particular Rose will meet these two requirements, the more I am content. Therefore the two characteristics that have influenced me in the above selection of climbing Roses are fragrance and continuity of bloom. All our climbers, not forgetting the rambling form of the lovely but scentless Frau Karl Drusehki, are delightful to the eye so long as they are in bloom.

Alister Stella Gray, Leuchstern and Morgenroth, placed 6, 7 and 8 respectively, are almost perpetual bloomers with me throughout the summer. The first two are too well known to need description, but Morgenroth is not seen, I think, as often as it deserves to be. It is like Carmine Pillar, but the flower is larger and lasts longer, and when suitably established it climbs freely. No one who has ever seen the Blush Rambler, No. 9, in perfection can, I think, deny its right to be placed high in the list of climbing Roses, for though almost devoid of perfume, its enormous clusters are indeed a joy to behold.

Reine Olga de Wurtemberg, No. 10, is such a grand climber and gives such a profusion of lovely bloom while it lasts that I would have liked, if possible, to have given it a higher place in my list. One plant with me has taken to rambling all over an adjacent Apple tree, and was indeed a lovely sight in June. Bouquet d'Or, No. 11, is such a general favourite that I am sure I need not dilate upon its

merits. It is fragrant and blooms almost as constantly as *Alister Stella Gray*. *Thalia*, No. 12, is almost a perpetual bloomer, a strong climber, and its lovely clusters of small white blooms on my pergola have been immensely admired.

It will doubtless appear strange to many rosarians that I have given no place to such well-known and charming ramblers as our old friends *Turner's Crimson Rambler*, *Dorothy Perkins*, *Paul's Carmine Pillar*, *Bennett's Seedling*, *William Allen Richardson*, *Ards Rambler*, *Ards Rover*, *Hiawatha* and *Minnehaha*. Well, my reason is because they are all so short-lived in respect to bloom, and none of them when in flower is, in my opinion, as good as those I have chosen. Neither the *Crimson Rambler*, *Dorothy Perkins* nor *Carmine Pillar* is better than the *Tea and Blush Ramblers* or *Morgenroth*. *Bennett's Seedling* is very charming and sweet, but is not as perpetual a bloomer as *Thalia*, nor as sweet as *Mme. A. Carrière*. *William Allen Richardson*, though truly a lovely button-hole Rose and in some seasons a fairly continuous bloomer, is not as good in any way as *Alister Stella Gray*. *Hiawatha* and *Minnehaha* are very short-lived bloomers compared with *Leuchstern*, and neither of them is better in other respects. *Ards Rambler* and *Ards Rover I* certainly are a bit loth to leave out in the cold, for the former is sweet and the latter is certainly one of the best of our crimson ramblers, but not as good as *American Pillar*. *Tausendschön* is very good, but with me not really a vigorous climber. I hope these remarks of mine may call forth others
G. B. W.

AUTUMN ROSES IN LONDON.

THE National Rose Society's autumn exhibition, held in the Royal Horticultural Hall, Vincent Square, Westminster—a detailed report of which appears on another page—was one of the greatest surprises that rosarians have experienced during the present year. Owing to the prolonged wet and cold weather it was generally anticipated that mildew would have created havoc among the flowers; but, in the opinion of those best qualified to judge, the show was the finest that the society has ever held in autumn. A pleasing incident to many of the older members of the society was the presence during the early hours of the show of Mrs. Reynolds Hole, widow of the late Dean Hole, who for so many years acted as president of the society.

As indicative of the enormous strides that have been made in Roses during recent years, the exhibition was a great triumph. One had only to look through the various exhibits and note the prominence given to comparatively recently introduced Roses to get an idea of the extent to which our gardens have been enriched during the last decade by raisers in this and other countries. *Lyon*, *Lady Hillingdon*, *Irish Elegance*, *Harry Kirk*, *General Macarthur*, *Jessie*, *Miss Cynthia Forde* and *Frau Karl Druschki* easily held the best positions in all the large groups, yet ten years ago the majority were not in commerce.

Another surprising feature was the marvellous colour that was to be seen in many of the Roses. *Lady Hillingdon*, a most disappointing Rose in summer, was very beautiful in colour, the rich apricot yellow combining well in most instances with that glorious Rose *Lyon*. *Rayon d'Or*, in the few instances where it was shown, was exceedingly brilliant, and undoubtedly it is the coming yellow Rose for beds. It is a true yellow, the colour of the old Austrian Yellow, and is a bedding Rose quite by itself.

Mention of bedding Roses reminds us of the

secondary place that the exhibition Roses had to take on this occasion. By this we do not mean that they were of inferior quality. Mr. Hugh Dickson, Mr. George Prince and one or two other growers staged blooms of perfect quality, but for every visitor that found interest in them there were ten surrounding the beautiful vases and baskets of garden Roses, which shows the wisdom of the society in arranging classes for both sections. We suppose that exhibition Roses will always be with us, but there is no gainsaying the fact that, in the eyes of the general public, who, after all, form the supreme tribunal, they are of quite secondary importance compared with the free-flowering garden varieties.

Among the new Roses that received awards were two from the *Emerald Isle*, viz., *British Queen* and *Mrs. Charles Pearson*. These came from Messrs. McGredy and Son of Portadown, raisers who have won high honours in the lists of the society for several years past. The first-named, which is a large, full, creamy white Hybrid Tea, received a silver-gilt medal last year, and on this occasion was granted the more coveted gold medal. This high honour also went to *Mrs. Charles Pearson*, which is a glorified *Lyon* in colour, but in shape more resembles *Arthur R. Goodwin*. It is a beautiful Rose, very free flowering, and the blooms retain their exquisite colouring to the last. A gold medal also went to *Sunburst*, as grown under glass. This is undoubtedly a superb apricot yellow Rose for forcing, but the flowers come very pale outdoors. Another beautiful Rose of M. Pernet-Ducher's raising, but which did not get an award owing to the limited quantity shown, was *Willowmere*. It is a long, pointed Rose, somewhat after the colour of *Lyon*, but with much more pink diffused through the petals. Messrs. George Paul and Son, Cheshunt, had two new varieties on show, one being *Little Dorrit*, a beautiful Hybrid Tea with conical-shaped flowers, the buds of which are nasturtium red and apricot, these opening to more apricot and cream, with the red towards the outside. This gained a silver-gilt medal. The other variety, which secured a silver medal, was *Queen of the Musks*, a Hybrid Musk Rose of delicate shell rose pink colour. It is exceedingly free and a continuous bloomer, the trusses being very large.

THE ROCK AND WATER GARDEN.

THE BEST SAXIFRAGES AND HOW TO GROW THEM.

(Continued from page 468.)

The *Giant-leaved Megaseas* are at once the boldest and showiest of the entire race, and particularly valuable to the gardener by reason of their leaf-beauty and ornamental flowering. In the case of the finer evergreen kinds, as, e.g., *S. ligulata*, *S. l. speciosa* and *S. cordifolia purpurea*, the plants are not infrequently employed in spring bedding arrangements, where they constitute quite a feature. That last named, too, is of value at a later date, when the foliage assumes a rich reddish crimson hue, the stems, if allowed to remain, putting on a similar colour-tone. Those named, in conjunction with *S. cordifolia* (type) and *S. crassifolia*, are noteworthy also because of their perfect hardiness and their adaptability to town gardens and smoky districts.

As a great belt of 3 feet or 4 feet wide to a sumptuous planting of *Rhododendrons*, all growing

in the greatest luxuriance in soft, fat clay soil, I have seen them worthily playing their part in an arrangement noteworthy for its boldness, its liberal treatment and its artistic effect, in conjunction with the utmost simplicity and the truest zeal and economy. The idea was the grasp of the master mind; the very fitness of the partnership association was unassailable. Above all, it was good. It may be that we cannot all garden upon so liberal a scale as this, though the fact should not preclude our bringing together plants fitted for each other's company where permanent effect is the main object in view. On the boldest rock crest the plants have a beauty of their own, while for clothing many a sloping bank they are, perhaps, without an equal. Brilliant, Distinction, Progress, splendens and gigantea are some of the finer of a modern set, and all are characterised by pink, rose or reddish flowers on branching cymes from 1½ feet to 2 feet high. They ask for nothing more than ordinary garden culture, and may be increased quite easily by division, preferably during late summer and autumn, so that their spring flowering be not quite lost.

S. oppositifolia.—The "best" must of necessity include those which produce carpets of growth smothered with erect white, rose or crimson flowers quite near the ground from February to April. These are not happy near to towns or smoky districts, and prefer their native mountain home, where they produce sheets of colour, frequently in a veritable torrent. They are often seen in fullest splendour on quite barren rocks, or, anon, in cooler ground with more luxuriant growth and fewer flowers. In cultivation they love to get away from their pot prison, to ramble and flower galore in the cool sand of the plunging beds around, and the fact is worthy of note. Sandy peat of a fine character and loam in about equal parts suit them well, though they grow quite well and flower freely in most loamy soils. The varieties worthy of note are *alba*, *major*, *pyrenaica* and *splendens*, the last two very rich in colour. Next week I hope to conclude these notes by a selection of the choicest kinds suited to alpine-house or pot cultivation.
E. H. JENKINS.

THE GREENHOUSE.

SEASONABLE NOTES ON AURICULAS.

Watering.—It cannot be said with much truth that the Auricula demands a considerable amount of the cultivator's time during the autumn months, but the attention required is of the greatest importance, because neglect may easily spell the ruin of many valued plants. Watering calls for incessant consideration. It is well within the bounds of possibility that the soil in the pots will continue sufficiently moist for several days in the autumn; but, on the other hand, the soil will dry out rapidly in some pots, especially when the days are warm and sunny and the position of the frame is exposed. In the case of healthy offsets growing in small pots, water may be needed frequently for upwards of another month, and if a supply is not forthcoming when it is wanted, the chances are that the young plants will suffer seriously.

Rotting.—It is unfortunate that plants will show a tendency to rot off in the autumn and winter, and the efforts of the cultivator to prevent such an occurrence must be unceasing. When the drainage in the pots is defective, trouble from this cause is sure to arise sooner or later; and although it is

on the late side for disturbing the roots, it is wise to take the slight risk rather than run into one that is much greater and may lead to so many deaths. Preventives of rotting are open compost that is so porous that air is constantly passing through it, perfect provision for drainage and comparatively small pots, preferably those that are small in diameter compared with their depth. Another precaution which it will be sound practice to take is to keep the soil slightly on the dry side rather than on the wet side when the dull days come.

Autumn Trusses.—All Auricula-growers are agreed that trusses of flowers thrown up in the

remainder of the stem ought to be allowed gradually to wither away. There is an element of danger in cutting close to the crown of the plant; hence the advice to leave the whole length.

Green Fly.—There appears to be no plant grown in gardens which this pest will not attack at some time or another, and it is beyond dispute a nuisance to the Auricula-grower when it comes, as is often the case, in the autumn. The plants are extremely difficult to sponge properly, and it is commonly impossible to fumigate, so that these means of extermination may be regarded as out of court. The thing to do is to take a camel's hair brush and gently remove every fly that can be seen.

THE FLOWER GARDEN.

A LILY FOR THE OUTDOOR GARDEN AND GREENHOUSE.

LILIAM LONGIFLORUM yields to no other member of its genus in beauty and utility. Ever since its introduction to gardens about 1862 it has claimed the attention of cultivators, and to-day the traffic in this plant has attained to enormous proportions, in which the commercial enterprise of at least three continents is more or less at stake.



THE PERGOLA, WITH FLAGSTONE PATHWAY BORDERED WITH LILIAM LONGIFLORUM, AT COOMBE COURT GARDENS, KINGSTON HILL, SURREY.

autumn, especially on seedlings, are not to be desired, and various methods have been suggested to prevent this happening. It is, however, common for this to occur in the family, and it is doubtful whether any system of management will ever be devised that will reliably prevent it. Plants that are potted late in the season are almost as prone to throw up autumn blooms as those which are dealt with earlier; but, whatever the cause, it is a disadvantage to the grower, particularly so perhaps when seedlings are being dealt with. If we accept the inevitable, it causes little trouble, because the head should be immediately picked off below as soon as it is properly formed, and the

This task is rather a tedious one, but it is effectual, and when it is done with care one has the satisfaction of knowing that not a single enemy remains to play havoc with the plants.

Purchasing Plants.—The present is an admirable time to purchase young plants. It is surely unnecessary to urge readers of THE GARDEN to go to firms of the highest repute, such, for example, as those who offer their wares in the advertisement pages of this paper? If the youngsters are clean, healthy and vigorous when they arrive, it is not a matter of serious difficulty to maintain them in that condition; but weakly plants will cause endless worry.

F. R.

It is scarcely a matter for surprise that this species should appeal to a universal taste. The waxy white trumpets, with their rich fragrance, bright orange stamens and clammy stigma, are details readily apparent on close inspection, yet it is the graceful sweep of the erect stems, with the elegantly-poised flowers, that most directly force themselves on a casual observer, and it is this attribute that proclaims it a plant of inordinate beauty.

Its utility is disclosed by its adaptability to various methods of cultivation, which is further augmented by modified forms, some of which flower naturally in advance of the type, while

others flower later and so form a succession. *Lilium longiflorum*, the type, is a plant indigenous to China and Japan, where it is extensively cultivated, and whence it is largely imported to this and other countries, arriving here during autumn and winter. Besides the type, which is readily recognised in the dry bulb by its numerous small, close-set scales, there are several varieties. *Multiflorum* has broad, recurving leaves and averages more flowers to each stem. *Giganteum* is a taller plant, and ten days later in flowering than the type. *Eximium* is characterised by dark-coloured stems carrying flowers of stout substance, and is taller than *giganteum*. *L. Harrisii*, the Bermuda Easter Lily, so highly esteemed for early forcing, is but a geographical form of *longiflorum*, and is generally considered as being synonymous with the Japanese form, *eximium*. Unfortunately, the source whence *L. Harrisii* usually emanates has become unreliable, and bulbs grown in Formosa are coming much into favour for early forcing. The variety *formosanum* takes its name from this Eastern island, and it appears to approximate to the Japanese variety *multiflorum*. Bulbs come to hand in this country during September and October, and if potted up before the end of November there is little difficulty in flowering it by Easter. It is a superb Lily, bearing immense flowers on very stout stems that frequently attain a height of 4½ feet.

L. longiflorum and its varieties, when grown in pots, are most desirable plants for furnishing greenhouses and conservatories. Single bulbs may be placed in 4½-inch pots, or several bulbs placed in larger sizes. The soil should consist of good fibrous loam, three parts; leaf-soil, one part; spent Mushroom-bed manure, one part, with a small quantity of sand added. The bulbs are placed an inch beneath the surface of the soil and potted firmly. No top-dressing is necessary, except in the case of *formosanum*, the bulbs of which should be kept 1½ inches to 2 inches beneath the surface when potting. After potting place in a cool structure with plenty of light, it being advisable to encourage stout, firm growths and free rooting in the early stages, without which no good results can follow. After-treatment depends upon the season in which the plants are required to bloom. Early-potted bulbs of *formosanum*, when well rooted, require a temperature of 50° to 55° in order to flower them by the end of March and early April. A similar temperature will induce *longiflorum* and its variety *multiflorum* to flower during May, while grown under cool greenhouse treatment these latter flower during early June. The varieties of *giganteum* and *eximium* flower ten to fourteen days later.

In the open garden *L. longiflorum* and its varieties introduce a distinct type of beauty, which can only be equalled by another member of this genus,

namely, *L. candidum*; but, unfortunately, this species is impossible in many gardens owing to ravages by the Lily disease, so that under these circumstances *L. longiflorum* is a most welcome substitute, and one that can be recommended with all confidence. It lends itself to decorative effect in most positions where hardy flowers are grown, such as in beds and borders, and, as shown in the illustration on page 477, it is peculiarly effective when occupying the parallel borders of a pergola. The combination of colour derived from the overhead Roses and Clematis becomes sharply contrasted with the snowy purity of the Lilies, while the richness of the former in conjunction with the



THE NEW EARLY-FLOWERING COSMOS WHITE QUEEN. A BEAUTIFUL FLOWER FOR AUTUMN BORDERS.

stateliness of the last-named produce an effect that is altogether pleasing, and, incidentally, results in freeing formalism in garden design from all charge of harshness.

When grown in the open garden, I am a strong advocate of planting *longiflorum* and its varieties in the dry state. For this purpose the ground should be carefully prepared in autumn, the position being well drained and the ground trenched to a depth of 2 feet. The best soil is a medium loam, to which may be added, during trenching, a quantity of thoroughly-decayed leaf-soil and spent Mushroom-bed manure. Bulbs should be procured towards

the end of October or early in November and planted during the latter month. Plant the bulbs 12 inches apart, allowing 4 inches of soil to cover them, and surround each bulb with sharp sand. On heavy soils and in districts subject to much wet in winter, it is advisable to cover the ground after planting with some protective material, such as Bracken or straw.

Provided good bulbs are obtained in the first instance, at least three years', and most probably four years' good service will be rendered by them, as it is only under most favourable conditions that *L. longiflorum* maintains its flowering strength longer. After-treatment consists chiefly in encour-

aging the maximum vigour in stem and leaf. To this end copious waterings should be given during the growing season, using rain-water, alternated with liquid manure made from farmyard manure in a thoroughly-decomposed condition. Water containing lime or iron in quantity should never be applied to this Lily under any circumstances.

THOMAS SMITH.

Coombe Court Gardens, Kingston.

A NEW WHITE COSMOS.

On this page we publish an illustration of a new *Cosmos* named *White Queen*. It is a graceful and elegant variety, quite pure in tone. As a border flower for summer effect it will doubtless prove an acquisition. It is quite as free-flowering as *Cosmos bipinnatus*, and commences blooming much earlier. In the cultivation of *Cosmos* it is well to note that they flower with the greatest freedom when grown on rather poor soil. On ground that has been heavily manured and copiously supplied with water, the plants are much inclined to produce an over-abundance of their fine feathery foliage at the expense of flowers.

FLOWER-BORDERED ROADS AT PURLEY, SURREY.

THERE are few towns in the country that can boast of such flower-bordered roads as Purley in Surrey, where William Webb, Esq., the owner of the Upper Woodcote Estate, has formed two "floral" roads on his estate. One is known as Silver Lane, and is composed of avenues of that most

graceful of native trees, the Silver Birch, carpeted with spring flowers and thousands of spring-flowering bulbs, starting with Winter Aconites and Snowdrops; then come patches of all the Croci, white, blue, and yellow; followed by Anemones until March brings us to the Daffodil. Thousands of these have been planted in scores of varieties—the lordly trumpet and the humbler Lenten Lily, the Poet's Narcissi and all its kindred are to be found, not planted in dozens, but in long stretches, as they should be. The Tulip, too, is represented, and its splashes of colour add beauty here and there. A bulb catalogue would almost

have to be reproduced if all the names were given in detail. Enough has been said to prove that in the early months of the year Silver Lane is very beautiful with its flowers, and at other seasons of the year the Silver Birch makes a delightful road. I am sorry I cannot send you a photograph of it, but I have made arrangements to have one taken this coming spring.

The other road deserves rather fuller description; it is known, I believe, as the South Border, and is composed very largely of herbaceous plants, with patches here and there of annuals. Nearly all have been raised from seed by Mr. Webb's able foreman, Mr. D. Bignell, but many of the newer varieties of herbaceous plants have had, of course, to be purchased, and no expense has been spared to get the best and the best only. A glance at the list of, say, Phloxes, will show the truth of this statement. The border was planted last autumn, and in this instance the flowers are only on one side of the road, *i.e.*, the north, as it was felt that it would be useless to attempt to make a satisfactory display of herbaceous plants with a northern aspect. The flower-bed is 12 feet wide and about four feet deep. It was made of top spit, with plenty of manure. In front of it is a 5-foot grass path, then a ha-ha, *viz.*, a 3-foot ditch with a sunk wall, and a low wire fence to protect the flowers from the public.

At the back of the border is a strong Privet hedge as a background and shelter from the cold winds; and, in order to prevent the roots of the Privet robbing the plants, a slate wall has been sunk to separate the two. The main scheme is herbaceous plants; but to prevent monotony in so long a border (nearly one-third of a mile) the line is broken here and there by weeping Roses, Clematises of sorts, Sweet Peas and similar plants. The whole of the planting was carried out by Mr. D. Bignell, who is still responsible for the upkeep.

The following are a few of the immense variety of plants the border contains: *Anchusa italica* Dropmore variety has been good; *Anemone Queen Charlotte*, just now at its best; *A. japonica alba*, *Artemisia lactiflora*, *Bocconia cordata*, *Chrysanthemum King Edward VII.*, flowers good; *Coreopsis grandiflora*, *Delphiniums Queen Wilhelmina* and the King of *Delphiniums* have been greatly admired for their beautiful spikes of bloom; *Echinops Ritro*, *Erigeron speciosus grandiflora*, *Eryngium oliverianum*, fully 4 feet in height and beautiful heads of bloom, now a deep blue in colour; *Helenium pumilum magnificum* is just now one mass of good bloom; *Helenium Riverton Beauty* and *Riverton Gem* are also coming into flower, fully 5 feet in height; *Solidago Golden Wings*, some fine spikes; *S. Buckleyii*, also some fine plants; *Phloxes Elizabeth Campbell*, *Frau Antonin Buchner*, *Flora Hornung*, *Etna* and *Le Soleil* have all made a fine show, the weather having suited them; *Le Madhi*, too, has had splendid heads of bloom; *Statice latifolia*, *Scabiosa caucasica*, *Gaillardia*, *Gypsophila paniculata*, in groups; *Verbascums Caledonia* and *A. M. Burnie*; *Hollyhocks*, in large variety, some are fully 12 feet in height, and have been excellent; *Onopordon bracteatum*, the large Thistle, has made some fine specimen plants fully 8 feet in height; some fine groups of *Pentstemons*, *Scabious*, *Helichrysum*, *Asters*, *Stocks*, *Antirrhinum*, annual *Chrysanthemum*, *Salpiglossis* and *Larkspurs* (rosy scarlet) are just now in full flower; *Lilium auratum*, *L. Henryii*, *L. tigrinum* and *L. speciosum rubrum magnificum* are all showing promise; *Dahlias* in numerous varieties, *Cactus*,

Pompon and decorative, and these with *Chrysanthemums* and *Michaelmas Daisies* carry the flowering season right on to the late autumn. Spring-flowering bulbs are also freely introduced, so that at no season of the year is the South Border without interest.

The newly-finished lodge at the entrance, known as *Watersmeet*, represents a cottage on the hillside, with streams of water converging to a *Lily pond* below.

Such is a brief description of an attempt to get away from a normal building estate; and if Mr. Webb's example could only be followed, as it might easily be, by landowners throughout the country, surely this England of ours would be a better and a brighter place to live in. The influence of flowers is manifold, and it is all for good. Purley is to be congratulated that that part of it belonging to William Webb, Esq., at any rate, is being developed on such lines. Another road, which is

"Will my soil grow Apples?" is the first question, and the reply can always be "Yes." On the lightest sands, heaviest clays and poorest chalk soils Apples can be found thriving, *provided always* due care has been given in selection, and also to make up soil deficiencies. The use of the surface-rooting *Paradise* stocks enables the roots to be kept in the best soil, and, still more important, where the manure applied can reach the roots, I should like to say more here on the subject of manure for fruit trees, but perhaps a later article may give an opportunity.

The Best Type of Tree.—The next consideration is the form of the tree. I am always strongly inclined to forms which are the least removed from the natural. Horizontal espaliers must be recognised as partly ornamental, and what is gained in this direction is lost in others. For crop and ease of culture there is nothing better than the open bush. A slight concession to decorative effect



A PORTION OF THE HERBACEOUS BORDER BESIDE A PUBLIC ROAD AT PURLEY, SURREY.

bordered with *Roses*, I hope to describe in a subsequent issue. HERBERT E. MOLYNEUX.

THE FRUIT GARDEN.

THE BEST APPLES AND HOW TO GROW THEM.

IT has often occurred to me that if the culture of Apples were more difficult, we should see better fruit grown in our gardens. The obliging nature of the Apple, which, cultivate we never so unwisely, still produces some sort of crop, has prevented it from having the careful treatment it deserved. We all know the row of pyramids or espaliers down the middle path of the kitchen garden, shaded on one side by tall herbaceous plants and crowded on the other by the encroaching Cauliflower. It is on behalf of these often ill-treated trees that I take up my pen.

admits the pyramid, and where space is no consideration, the half or full standard give those whose need is quantity, but not immediate return or large individual fruits, their desires in the easiest way.

How to Plant.—Given, then, the tree, how, when and where shall we plant it? Granting good garden soil which has not been previously occupied by fruit trees, plant the trees in it as it is. Trees on *Paradise* stock with their shallow roots will not require a large hole, but the deeper-rooting and tap-rooted *Crab* stock which is used for standards and half-standards will want more accommodation. Plant firmly (this would be in double capitals if the Editor permitted!) and stake all large trees which are liable to be blown about. The very vexed and thorny question of pruning after planting is one that I hesitate to touch; but, taking my courage in both hands, I say, "Prune at once if under three years old; if over, wait till the following winter," and pass rapidly on to the question of "when" to plant.

When to Plant.—In good, well-drained soils, late October to November are good, but by no means the only months. Any time during the winter, if the weather is open and the soil not waterlogged, it is possible to safely transplant trees, and in my own case all moving is done in March, with results entirely satisfactory. In wet soils, or in high altitudes where winds are cold and drying, the later planting is infinitely preferable.

Where to Plant.—The third question of "where" is in most gardens limited to a small area. It should be an endeavour to plant always on the highest land, where frost in spring is less felt, where the trees will have a free air circulation and, growing "hard," will resist aphid and other pests. Avoid the proximity of large trees, even when they do not actually shade your fruit trees, as the air near them is often stagnant and causes a sappy growth, which is a temptation to aphid such as they are unable to resist.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Cattleya Memoria H. A. Tracy.—A magnificent hybrid *Cattleya* of exceptional size and perfect form. Shown by H. S. Goodson, Esq., Putney, S.W.

Dendrobium Shutei.—An interesting new species from the Philippines with pure white flowers. Shown by Messrs. Sander and Sons.

AWARDS OF MERIT.

Odontioda devossiana Fowler's variety.—A showy dark red hybrid. Exhibited by J. Gurney Fowler, Esq.

Lælio-Cattleya St. Gothard Glebe Variety.—A shapely-flowered hybrid resembling its parent, *Cattleya hardyana*. Shown by C. J. Phillips, Esq.

Chrysanthemum Crimson Polly.—This, as its name partly suggests, is a crimson sport from the well-known early-flowering golden yellow variety

individual flowers are very large and of rich pink colour, the panicles free and open, and giving evidence of that good attribute in a herbaceous Phlox, viz., the production of a large number of lateral shoots. The habit is most vigorous. From Mr. J. Box, Lindfield, Sussex.

Pentstemon Gaddesden Gem.—This is not one of the Gem class proper, and of which Newbury Gem is the type, but belongs to the large-flowered or florists' class, and is one of the finest we have seen. The flowers are crimson-coloured and have a white throat. A bed of it should look very telling. From Mr. A. G. Gentle, Little Gaddesden.

Dahlia Queen Mary.—A rose pink flowered variety of the large decorative set, with good strong stem. It is very showy. From Messrs. Cannell and Sons, Swanley.

Dahlia Crawley Star.—The first of a new type to which the name *Cosmea*-flowered has been given, and which is at least suggestive of the elegant character of a beautiful variety. The colour is rosy pink, and there are two rows of petals having a slight ring of crimson at the base. From Messrs. J. Cheal and Sons, Crawley.

Dahlia Selma (Pompon).—This in its set is quite a model flower, the florets perfectly and regularly arranged. The colour is palest fawn, with a tendency also to pale orange. From Mr. Charles Turner, Slough.

Dahlia Papa Charmet (Decorative).—A magnificent maroon crimson flowered variety of the large decorative set, with fittingly bold and strong stems. It is very handsome-looking. From Messrs. Hobbies, Dereham, Norfolk.

Dahlia Ideal (Collarette).—The outer florets are maroon crimson, the smaller inner florets of a yellow tone. The contrast is good.

Dahlia Albert Maumene (Collarette).—The outer florets are of rosy cerise colour, with white central florets. These were exhibited by Mr. J. B. Riding, Chingford.

Dahlia Jack Riding (Cactus).—The incurving florets are crimson, shading to orange at the base. A large and handsome variety.

Dahlia Nantwich (Cactus).—A fine incurving flower of the exhibition type, light fawn.

Dahlia Dolly (Cactus).—Crimson scarlet, heavily tipped with creamy white. These three came from Messrs. James Stredwick and Sons, St. Leonards.

The foregoing Dahlias, having been adjudicated upon by a joint committee of the Royal Horticultural Society and the National Dahlia Society, are entitled to the award of merit of the former and the first-class certificate of the latter.

Potato The Diamond.—A heavy cropper with oval, smooth-skinned tubers. Shown by Messrs. Barr and Sons.

Strawberry Merville de France.—An autumn-fruiting variety producing heavy crops of highly flavoured fruits. Shown by Messrs. George Bunyard and Co., Limited.

All the foregoing were shown before the Royal Horticultural Society on the 10th inst., when the awards were made.



A PORTION OF THE BORDER, PHOTOGRAPHED RECENTLY, A PLAN OF WHICH IS GIVEN ON THE OPPOSITE PAGE.

Pruning.—There are two general counsels which seem to be more needed than others, and they are these: "Thin your branches" and "Thin your spurs." The main branches of a standard bush or pyramid tree should be so placed that King Charles would have found them quite useless for the purpose that he sought the Oak at Bosobel. The thinning of spurs is perhaps the most neglected of all pruning operations. The exercise of imagination will aid here as elsewhere. Imagine on each spur one fruit of such a size as would ensure the first prize label being placed on it at next year's show. This will give you at once a measure of the necessary thinning. But it may be said, "We must have some as insurance against those which fail." As, however, each bud contains five flowers, these will still be enough for that purpose.

Maidstone.

E. A. BUNYARD.

(To be continued.)

Polly, and is therefore possessed of all the good attributes of that sturdy-growing and excellent sort. The plant is about two feet high, the colour a rich crimson. From Messrs. William Wells, Limited, Merstham.

Helenium autumnale rubrum.—A large and reddish crimson flowered variety of a well-known plant, which, if constant, should prove a great gain. The plant is of a tall habit of growth and a most profuse bloomer.

Achillea Ptarmica Perry's White.—A much larger and later flowering variety than either Bouquet or The Pearl, and, like these, belongs to the above-named species. The new-comer should prove of much usefulness to the gardener and the florist-decorator. These two plants came from Mr. Amos Perry, Enfield.

Phlox Rijnstroom.—This may briefly be described as a much-improved Pantheon. The

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Spring Bedding Plants. such as *Myosotis*, *Wallflowers*, *Polyanthus*, *Alyssum*, *Arabis* and *Aubrietias*, that are growing in lines should be given every encouragement by frequently stirring the surface soil between the plants whenever the weather permits, so that they will form good, healthy plants for placing out in their permanent quarters next month.

Pentstemons.—In order to perpetuate the better varieties of these, and also to ensure early-blooming plants next year, cuttings should be taken now and inserted in sandy soil in well-drained pots, preferably 5-inch, or else in a close cold frame containing a similar mixture. Where growths are plentiful, I prefer using the tips only; but if a quantity of a variety is desired, the growths may be cut up into lengths, *i.e.*, several cuttings made of one shoot. Make the soil firm and see that the base of the cutting reaches the bottom of the hole. Well water in and keep close. Shade from bright sunshine, and damp over lightly early in the day when inclined to be bright. As soon as rooted admit more air.

Antirrhinums.—Any special varieties may be propagated in much the same manner as the above.

The Rock Garden.

Sedum spectabile atropurpureum.—For this season of the year this bold and handsome species is a decided acquisition, valuable alike for the front of the herbaceous border, growing fully a foot in height, and each growth surmounted with a flat head of showy rosy crimson flowers.

Hardy Cacti.—Though departing from the usual class of plants, the hardier of the Cacti form an interesting class of plants for associating with rock or stone, and are particularly effective with the red sandstones. A position facing south or south-west should be chosen for them where they will receive full exposure to the sun, and a corner backed with fairly high walls will be another great advantage. Through the winter months some protection ought to be afforded them from heavy rains and other inclement weather, or the plants should be removed to a cool house. In such a position *Gerberas* also flower freely, as do the *Mesembryanthemums*, both of which should be potted and wintered in a cool house.

Plants Under Glass.

Violets.—The culture of Violets for supplying blooms during the winter months is practised in almost every garden, large or small, in some attended with a greater measure of success than others, due, I think, to the conditions suiting their requirements, though there are many little details to observe, and I will mention a few of the salient points necessary to ensure success. The frames should occupy an open position on fairly high ground, if possible, and whether they are heated or no matters but little. Avoid too great a depth of soil. A foot will be ample; less will suffice.

Lachenalias.—These are beginning to grow, and should be repotted or placed in baskets without delay and grown on in a cool house. When treated in the latter manner, they are most effective and quite easy to manage. Line the basket with moss, place a little soil in the bottom, and plant the bulbs upside down about four inches apart; then add a little more soil and so work the bulbs round the sides of the basket. Give a good soaking and hang up the basket.

Fruits Under Glass.

Earliest Trees of Peaches and Nectarines.—Young trees are often benefited by being lifted and the roots brought nearer to the surface. With trees that are going to be forced early, any such work should be put in hand at once before the foliage falls, as then the trees will have time to recover from the treatment. Syringing and shading should be done if the weather is bright and warm, but give abundance of air. For these and all other stone fruits add a liberal supply of old mortar rubbish and a sprinkling of wood-ashes, but avoid the use of manure, which generally only tends to make rank growth.

Trees and Shrubs.

Flowering Crabs.—During the month of August and well into September these, when in fruit,

are extremely beautiful and admirably adapted for planting not only in shrubberies, but also as specimens on the lawn, in the wild garden and more open positions in the woodland, and, apart from their freedom of flowering in the spring and highly-coloured fruits in the autumn, are highly esteemed for making that excellent preserve, Crab Apple jelly. A few of the best among the varieties we grow are John Downie, Beauty of Montreal, Dartmouth Crab, *Pyrus prunifolia fructu luteo*, *P. niedwetzkyana* and *P. baccata fastigiata bifera*.

Work Among Shrubs.—As soon as convenient it is a splendid idea to go through and mark any shrubs that need removing when the time comes, so that growth will not be too congested next year. See that the climbers are safe against wind and tie in any straggling growths, at the same time cutting out any useless old wood.

The Kitchen Garden.

Lettuce.—Another sowing should be made in a cold frame for producing supplies in the winter, the earlier sowings thinned and transplanted into a sheltered warm position or into skeleton frames. Bath Cos, Hicks' Hardy White and Hammersmith are good varieties.

Tomatoes.—The continuance of this crop will greatly depend on the weather. The results up to date have not been very satisfactory. Thin out the foliage and stop the plants, so that plenty of air and sun can reach them. As soon as the crop is threatened with frost, pick the largest fruits and place them in a dry, sunny position to ripen.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Dahlias.—Many of the Cactus varieties make only a slight display unless a good deal of the growth is removed so that the flowers are shown. The newer kinds of decorative Dahlias have long stems, but some of the blooms are so heavy that it is essential to tie them back. Single varieties must have the bloomed-out stems removed, else the seeds they bear stop the plants from flowering. The smaller-flowered decorative sorts, as well as the others, should be examined twice a week and dead blooms removed.

Larkspurs.—It is a mistake to be too particular to cut out the flower-stems which apparently have done flowering. If grown strongly and the plants are in perfect health, little flowering shoots are pushed from the sides and keep the plants gay for a very long time. See that the ties are perfect, else autumnal storms may break down the plants, which this year are more than usually tall and robust.

Montbretias.—These are not only very late, but hundreds have failed to flower at all, probably a result of being too dry last year. It may be worth while even yet to pull out the weakly growths from among the more robust, so that these may be the better enabled to become as perfect as possible before a cessation of activity.

Nepeta Mussini.—Short pieces dibbled thickly into a shallow bed of soil in a cold frame kept close till the turn of the year will all root and become nice stocky material for planting out in mixed borders or for carpeting Rose-beds and other purposes. It is indubitably one of the nicest free-flowering plants of a lavender colour that are available, and well worthy of more extended cultivation in gardens where soft colouring is essential.

Chrysanthemums.—The autumn-flowering varieties will now be in bloom, and are of much value to lift and mass where other plants have failed or, what is as bad, have become shabby. Always transplant in the afternoon, always plant deeply, always water profusely and always stake securely, and they will give satisfaction. I like the tall-growing varieties in preference to low-growing sorts, buff, bronze, yellow and crimson being the colours preferred.

The Rock Garden.

Saxifraga Andrewsii.—This is one of the nicest of late-flowering plants. It does not thrive in a dry soil; therefore a damp position should be chosen for it, and, if the soil inclines to be heavy, it will succeed all the better.

Propagation.—Cuttings of quite a large number of semi-shrubby plants will root if taken now and dibbled into a soil-bed in a cold frame or under hand-glasses or cloches. Some things can be kept only by means of constant propagation. Such are some of the New Zealand Veronicas, which one is never sure of standing over winters. The many varieties and species of shrubby Candy tufts also root freely if taken now. Alpine Phloxes and Dianthi of the plumarius section are others. None of these asks for much space, and may safely be inserted almost touching each other, but leaving 3 inches between the rows.

Alterations.—No time of the year is more suitable than this for making alterations, either on the rockery as it exists or extending it in any direction, there being yet time to replant and get plants re-established before the rigours of the winter season are upon us. Everything being prepared, an enormous amount of work can be overtaken in a week or ten days.

The Plant-Houses.

Rhododendrons.—These may be returned to greenhouses at any time, first cleaning them thoroughly, seeing that the drainage is in perfect condition, the pots washed clean and the surface of the soil refreshed. There is usually much dead foliage on Azaleas, which should be shaken off and the plants syringed, laying the upper edge of the pot during the operation on two bricks to save the soil from being wetted. Camellias may either be syringed with an insecticide or sponged.

Chrysanthemums.—Forward plants will be much better placed under cover in a cool structure than left to the mercy of the elements. The earlier of the bush plants, both double and single, will need to have the buds thinned, and the plants will probably be much benefited by an application of loam and manure in equal proportions, with a small proportion of an approved artificial manure to the surface, and at least half an inch in thickness. Mildew must be looked for and counteracted by dustings of flowers of sulphur.

The Vegetable Garden.

Tomatoes.—Late Tomatoes are much later than usual, owing to the inclement weather throughout. To ripen them off they must now be treated to artificial heat and the minimum of water at the root. The Tomato seems capable of thriving without water, and at this period it is astonishing how long the plants go on without receiving any. Every lateral or axillary growth as it pushes should be rubbed off, and no foliage retained other than the few main leaves. It is unnecessary to ventilate the structure in which the plants are growing.

French Beans.—These cannot be expected to bear much longer, the first autumnal frost usually terminating their existence. Meanwhile see that no pods are left to mature, and the soil between the rows may be loosened with a fork, which will be a help to the crops as long as the weather continues fine. Those in frames should be well forward, and if too robust, which sometimes happens, the more weakly growths should be removed. It is usual in big establishments to commence forcing in pots at this season, fresh batches being prepared at short intervals throughout the season.

The Fruit Garden.

Apples.—Continue to pick the more forward fruits of soft-fleshed varieties and store them in the Apple-room. They keep perfectly if heaped on the shelves, provided the fruits are sufficiently matured and no damaged ones are among them. Keep the windows open meanwhile. Fruits left on the trees will plump up considerably.

Pears.—Quite a number of varieties will need attention, looking them over about twice every week for the next three weeks or so. The fruits must be laid out singly in one layer, and should be in a dry room apart from Apples if it can be so arranged. By picking at intervals, the period of use of each variety is extended. An interval when none ripens naturally may be bridged by introducing the more forward fruits into a vinery or other heated structure.

Brambles.—The Parsley-leaved variety is of much value now and later, and carries immense crops. We also grow a quantity of Japanese Wineberries, which are valued for mixing with Apples in tarts. Birds are very fond of this fruit, and where they abound it is almost imperative to place doubled nets over the bushes.

R. P. BROTHERTON.

Tynningham, Prestonkirk, N.B.

**ANSWERS
TO CORRESPONDENTS.**

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEA SEEDS (A. B.).—The pods of Sweet Peas should be left on the plants until they are quite dry. They feel greasy to the touch before that stage is reached. If they are stored in a dry place the seeds can be removed from the pods at convenience.

SWEET PEAS (Perplexed).—Most of the yellowing of Sweet Peas is due to some root trouble, as one might suspect from the appearance of the plants; but unless the whole plant, and especially the root, is sent, it is quite impossible to be sure what the cause of the trouble is.

SWEET PEAS DISEASED (Dolphin).—There is nothing you can do that will benefit the Sweet Peas. Secure what flowers you can from them and then burn the lot, roots and top growth. It is unwise to grow Sweet Peas on the same ground two years in succession.

FRAGRANCE IN SWEET PEAS (W. B. B.).—Practically all the old varieties, such, for example, as Lady Griseld Hamilton and Dorothy Eckford, are very sweet, and would answer your purpose. You will be particularly interested in the Rev. Joseph Jacob's note on the subject on page 378 of THE GARDEN dated July 27. The foods which you name should give you excellent colour, but you might try nitrate of potash now and again at half an ounce to the gallon of water, giving three gallons to the square yard.

CALOCEPHALUS (LEUCOPHYTA) BROWNII (Regular Reader).—This silver-leaved bedding plant is a native of Australia, and during the winter requires the protection of a greenhouse. It is propagated by cuttings of the young growing shoots, taken off at a length of about two inches, and dibbled into a compost made up of equal parts of loam, leaf-mould or peat and silver sand, the whole being passed through a sieve with a quarter of an inch mesh. The pots prepared for the reception of the cuttings should be quite clean and effectually drained. A little of the rougher compost which does not pass through the sieve may be placed immediately over the crocks, and on this the finer soil, made quite level and pressed down moderately firm. The cuttings must then be dibbled in securely, care being taken to avoid overcrowding, while, at the same time, space need not be wasted. When a pot is finished, it should be given a good watering through a fine rose in order to settle the soil thoroughly in its place. Then the pots of cuttings must be placed in a close propagating-case, or covered with a bell-glass in a greenhouse temperature. They must, of course, be watered when necessary, have any signs of decay removed and be kept shaded. When rooted they may be potted singly into small pots, using much the same compost but with a lesser amount of sand, and kept in the greenhouse or in a frame till the bedding-out season arrives. Plants of the Calocephalus can be purchased at a cheap rate from those who make a speciality of summer bedding plants.

TREES AND SHRUBS.

FABIANA IMBRICATA (A. G.).—It is quite usual for the points of the branches of Fabiana imbricata to die after flowering; in fact, it is a good plan to remove the tops of the shoots as soon as the flowers are over. Providing your plant is otherwise healthy, there is no reason for any unhealthiness about it, and as you say that new shoots are being formed, we presume that it is in quite good condition.

HONEYSUCKLE GOING WRONG (A. W.).—It is possible that your Honeysuckle is infested with aphids, and if this is the case you cannot do better than syringe it well with a nicotine solution or with a solution of soft soap and Quassa chips. There is no necessity to peel the bark off the stems, neither do you need to cut the plant back hard, as you suggest. It would, however, do the bush good to thin it well and cut the remaining branches back a little. The thinning may be done at once, and the other pruning in February next.

TRANSPLANTING EVERGREENS (F. T. H.).—Providing the weather is damp, you may transplant Camellias, Hollies and Magnolias towards the end of August; but Laurels would be better left until the middle of September. In the case of very dry weather occurring, leave all until there is rain. After transplanting, shade any particular plants with canvas during bright weather for two or three

weeks and syringe the branches twice daily. It is also a good plan to reduce the branch system a little on large plants, particularly if the roots have been much disturbed. Whenever possible, however, a ball of soil should be removed about the roots of each plant.

LEYCESTERIA FORMOSA (Ilex).—Leycesteria formosa may be grown in a variety of ways. Some people prefer to see it as a naturally-grown bush. In such cases little or no pruning is required unless the bushes become very dense and the inner branches die. The necessary pruning should then be the removal of the worn-out wood. Other people prefer to cut away a certain amount of old wood each spring. This is a very good method, for it leaves the plant rather thin, and finer shoots and inflorescences are the result. Another method of culture is to cut the branches to the ground-line in March each year and rely on annual growths. Such shoots are effective in winter by reason of their bright green bark. On no account prune as soon as the flowers fade, for a further period of beauty may be looked forward to when the showy fruits are ripe.

KITCHEN GARDEN.

WART DISEASE ON POTATOES (W. H. S.).—The Potatoes are badly attacked by the disease called warty disease, due to Synchytrium endobioticum. You must at once notify the disease to the Board of Agriculture, Whitehall Place, London, S.W., and their inspector will give you further instructions.

CELERY (Reader).—Your Celery, so far as we can see from the poor and very badly-packed specimens sent, is attacked by aphids. Spray with paraffin emulsion or with Quassa and soft soap. Plants should always be packed in soft paper and placed in boxes, else they arrive in a very mangled state.

CELERY ROTTING (Shropshire).—The rotting of the Celery appears to have been caused by the bacteria, which apparently made their way into the plants by wounds made by some insect attack near their base. The specimens sent show the wounds quite plainly.

INJURY TO PEAS (J. C.).—The roots of the Peas are attacked by fungi. You are probably right in thinking the recent wet weather has contributed to the trouble, which has been prevalent both last year and this. It is frequently the case, too, that heavy manuring assists the fungus rather than the Pea. Thorough drainage and soil in good heart, but not with manure in layers, are the great things to aim at.

MISCELLANEOUS.

NAME OF POTATO.—H. Weller.—We think the Potato is Asleaf Kidney, but it is impossible to say definitely without flowers and foliage.

NAMES OF PLANTS.—R. S. G.—We think the Pelargonium is Kingswood. The Rose is usually shy in blooming, and we do not think you can do more than you have done.—*F. G. K. Herts.*—1, Silene fruticulosa; 2, Cardamine triflora; 3, Acaena sanguisorba; 4, Sedum spectabile; 5, send in flower.—*Kentish.*—1, Pinus insignis; 2, Pinus excelsa.—*T. P. Alvechurch.*—Eucumis punctata, will grow in cool house or sheltered corner outside.—*H. J. W., Tavistock.*—1, Achillea Ptarmica flore pleno; 2, Helianthus giganteus; 3, Sedum Telephium; 4, Fuchsia thymifolia; 5, Lobelia laxiflora; 6, Spiraea Menziesii; 7, Spiraea canescens; 8, Mimulus cardinalis.—*E. H. B., Esher.*—Senecio tangentius, a Chinese plant, not a native of these Isles.—*J. T., Wareham.*—Cupressus pisifera plumosa argentea.—*E. H., Aldrie.*—1, Funkia ovata; 2, Echinops exaltatus; 3, Solidago lanceolata (Golden Rod); 4, Aster corymbosus; 5 and 6, too scrappy to identify; 7, Caltha palustris (Marsh Marigold); 8, Rudbeckia laciniata; 9, Polemonium caeruleum (Jacob's Ladder).—*G. K. M.*—1, Probably Amorpha canescens; 2, Danæ Laurus (Alexandrian Laurel); 3, Anaphalis margaritacea (Pearly Everlasting).

NAMES OF FRUITS.—R. Childs.—1 and 2, Souvenir du Congrès; 3, Easter Burre; 4, Benrè Diel; 5, Yorkshire Greening.—*W. D. C.*—7, Hollandbury; 31, Worsley Pippin; 32, Lord Grosvenor; 21, Crimson Queen; 8, Cox's Pomona; 9, Old Nonsuch; 5 and 26, King of the Pippins; 24, Wellington; 29, Hawthornden; 23, Allen's Everlasting; 2, Worcester Pearmain; 30, Leathercoat Russet; 27, Ribston Pippin; 10, Boston Russet; 28, Cellini Pippin; 11, Verulam; 15 and 17, Williams' Bon Chrétien; 25, Belle Julie; 14, Fertility; 13, Beurré Hardy; 12, Doyenné du Comice; 20, Beurré de Aremberg; 4, Lawson's Golden Gage.—*Mercury.*—Apples: 1 and 11, Ribston Pippin; 2, Lane's Prince Albert; 3, Yorkshire Greening; 4, Worcester Pearmain; 5, Lord Grosvenor; 6, Yorkshire Beauty; 7, Stamford Pippin; 8, 12 and 15, Cox's Orange Pippin; 10, Mère du Ménage; 13, Ecklinville Seedling; 14, Stoke Pippin; 16, Pickering's Seedling; 17, Reimette du Canada; 18, Bowhill Pippin; 19, Hambleton deux ans; 20, Warner's King. Pears: Beurré d'Amanlis; 2, Beurré de Jonghe; 3, Josephine de Malines; 4, Doyenné du Comice; 5 and 13, Catillac; 6, Beurré Clairgaze; 7, Duchesse d'Angoulême; 8, Souvenir du Congrès; 9, Uvedale's St. German; 10, Gansel's Bergamot; 11, Winter Nellis; 12 and 17, Williams' Bon Chrétien; 14, Fertility; 15, Brown Burre; 16, Marie Louise; 18, not recognised; 19, Marie Guise.—*R. M.*—1, Cornish Gillyflower; 2, Golden Noble.—*W. B.*—7, Pearson's Plate; 51, Yellow Ingestre; 58, Old Nonpareil; 66, Cox's Orange Pippin; 48, Cox's Pomona; 37, Doyenné du Comice.—*J. T., Wareham.*—Figs: 1, 2 and 4, Brunswick; 3 and 5, Brown Turkey; see also "Names of Plants."—*G. Tyler.*—1, Pittaston Duchess; 2, Beurré d'Anjou; 3, Green Pear of Yar; 4, Doyenné du Comice; 5, Hoary Morning; Shepherd's Bullace.

SOCIETIES.

ROYAL CALEDONIAN HORTICULTURAL SOCIETY.

THIS, the leading Scottish society, held its annual autumn show in the Waverley Market, Edinburgh, on September 11 and 12. It was anticipated that the exhibition would hardly be up to its usual high level on account of the nature of the season, and also to the fact that the special efforts made in connection with the Glasgow and Dundee shows would prevent some exhibitors from competing. To a certain extent the latter circumstance affected the exhibits, but others were sent, and the show, as a whole, was superior to the average.

COMPETITIVE CLASSES.

In the competitive section the chief class was that for the Scottish Challenge Trophy for Grapes, the prize consisting of the 50-guinea challenge cup, presented by Mr. W. H. Massie, a gold badge and £6 in money. As Mr. James Dixon, gardener to Lord Rowallan, Rowallan, Ayrshire, had won the cup twice previously, keen interest was felt regarding the winner this time. Mr. Dixon again proved the victor, and the handsome cup now becomes his property. This year he again met strong competition, but won by only two points over Mr. J. H. Goodacre, Elvaston Castle. Out of a possible 74 points Mr. Dixon obtained 57½, his best being two bunches of Madresfield Court, on each of which he only lost 1 point; Mr. Goodacre obtained 55½ out of 74; third, Mr. D. Halliday with 53 out of 74; fourth, Mr. G. Mollison with 42½ out of 74.

Another class of much interest was that for a table of dessert fruit decorated with plants. Here Mr. Goodacre was first for both fruit and decoration, gaining 100½ points for the former and 14 for the latter; second, Mr. W. Galloway, Gosford, with 92½ for fruit and 13 for decoration; third, Mr. G. Mackinlay, Wroest Park, with a total of 91½.

There was a good entry for twelve dishes of fruit, grown in Scotland, and Mr. W. Hunter, Yester, won, Mr. J. Kidd, Carbery Tower, being second, and Mr. J. M. Stewart, Mollance, third, all with fine fruit.

In the collection of twelve dishes of fruit, grown in an orchard-house, Mr. G. Mackinlay was awarded the first prize. The smaller classes for Grapes were very good, and the winners of first prizes were Mr. J. J. Wann, Mr. W. Campbell, Mr. W. Galloway, Mr. T. M'Phail, Mr. J. H. Goodacre, Mr. J. Middleton, Mr. S. Gordon, Mr. L. Moodie, Mr. D. Kidd, Mr. G. Anderson, Mr. J. Dixon, Mr. J. E. Davis, Mr. D. Halliday and Mr. J. M. Stewart. Mr. Goodacre and Mr. A. Williams led for Melons; Mr. J. Wood for Figs; Mr. J. H. Goodacre for Peaches; Mr. J. K. Brown for Nectarines; and Mr. W. G. Pirie for Apricots. Mr. J. H. Goodacre had the best collection of dessert, and Mr. S. Gordon of culinary Plums, Mr. J. Wood, Mr. G. M'Glashan, Mr. R. G. Sinclair, Mr. J. Duff and Mr. J. Borrowman winning in their Plum classes, these being very good indeed. Apples were strong classes, and were so numerous that details cannot be given, but Mr. R. Whiting was first for the collection of twelve varieties, Mr. J. Duff winning in a similar class for fruit grown in Scotland. Pears were fine, and the honours in the open class for the collection went to Scotland this time, Mr. R. R. Greenway, Benmore, being first. For a collection confined to Scotland Mr. W. Galloway was first.

The plants were of high quality, but no prize was offered for a group, and the classes were thus comparatively unimportant, though drawing out excellent exhibits. Mr. J. M'Neil had the best four stove or greenhouse plant; in flower; Mr. A. Jels the best Orchids; Mr. J. M'Neil the best exotic Ferns; Mr. A. M'Millan the best foliage plants, exclusive of Palms, and the best six table plants, Mr. W. T. Galloway led with tuberous Begonias, and Mr. W. Page with Chrysanthemums.

Cut flowers were of wonderful quality, considering the season, and reflected great credit on the numerous exhibitors, only a small number of whom can be named at present. In the open classes Messrs. G. Mair and Son occupied their wonted high position with Gladioli. Mr. J. Smellie won the first prize for Cactus, and Mr. J. Paul for Pompon Dahlias. Messrs. J. Cocker and Son led with thirty-six Roses, distinct, with very beautiful flowers; second, Messrs. D. and W. Croll; third, Mr. W. Ferguson. Mr. R. C. Ferguson had the best Hybrid Tea Roses, and Messrs. D. and W. Croll received the first for eighteen Teas. For twelve vases of exhibition Roses, and also for twelve vases of decorative Roses, Mr. W. Ferguson was first, the same exhibitor carrying off the premium for a collection of Roses. With grand flowers Mr. W. Smellie won for early Chrysanthemums.

In the gardeners' classes Mr. John Fletcher, Auchensweeth, Lanarkshire, practically swept the boards with his Sweet Peas, which won for him the firsts in the classes for twelve and six bunches, and for a new variety not in commerce. Mr. J. Stewart, jun., led for Gladioli; Mr. C. Shaw for Cactus Dahlias; Mr. J. Simpson for twenty-four Roses and for twelve Teas; Mr. J. Mathison for twelve Hybrid Tea Roses; Mr. C. Kay with Pansies; Mr. W. Boyes with Violas; Mr. W. G. Pirie with herbaceous flowers; and Mr. W. Young won the first for his collection of cut flowers grown in the open. Other classes cannot be detailed.

Vegetables were not so numerous as we have seen at some previous shows, and the quality seemed a little more irregular than usual, though, as a rule, very fine. For the collection of eighteen dishes Mr. W. Young, Craighlaw, led; second, Mr. J. E. Davis. In the class for a collection of twelve dishes, grown in Scotland, Mr.

C. Shaw, Boquhan, led, with Mr. W. P. Bell and Mr. R. Stuart respectively second and third.
The amateurs' classes were not specially strong, although comprising a number of good exhibits.

TRADE EXHIBITS.

Trade exhibits always lend a high attraction to this show, and, although a few prominent firms who had exhibited at Glasgow did not send this season, the display was a magnificent one.

Messrs. Dobbie and Co., Edinburgh, exhibited a grand lot of flowers, making a special feature of their Collarette and Paony Dahlias, which were extremely fine; magnificent Sweet Peas, Roses and other flowers. These formed a great centre of attraction. Gold medal.

Messrs. Storie and Storie, Glencarse, Perthshire, set up a fine display of fruit trees in pots, Celosias, Carnations, cut fruit and other subjects, including their Excelsior Iceland Poppies. Their *Præcox* Carnations, from seeds sown in February, and their strain of Celosias were much noticed. Silver-gilt medal.

Messrs. W. Cutbush and Sons, Highgate, London, staged a magnificent group of hardy flowers of great interest, together with dwarf and standard Polyantha Roses. Silver-gilt medal.

Messrs. R. Wallace and Co., Colchester, contributed a capital display of hardy flowers, Gladioli and Montbretias M. Star of the East, a magnificent flower, received great attention. Silver medal.

Messrs. E. Webb and Sons, Wordsley, staged a selection of their specialities in vegetables and flowers of the highest quality, and excellently displayed. Silver-gilt medal.

A fine variety of Gladioli of the different classes was sent by Mr. S. A. Jones, Kilkenny. Silver medal.

Mr. John Downie, Edinburgh, contributed a table of Begonias, Gloxinias and other flowers in fine strains. Silver-gilt medal.

Another Edinburgh firm, Messrs. Tillie, White and Co., staged a fine lot of vegetables, Gladioli, Lilies, &c. Silver medal.

Mr. David W. Thomson, Edinburgh, sent a capital exhibit of Gladioli, embracing the leading sections of this handsome flower in varieties of the highest quality. Silver-gilt medal.

Messrs. John Forbes, Hawick, Limited, as usual, made a fine exhibit with their florists' and other flowers, their stand showing Phloxes, Pentstemons, Dahlias, Carnations, &c., in the most modern types. Silver medal.

A striking display of hardy border and other flowers was sent by Mr. D. O'Mish, Crieff, and we observed among these a number of excellent Delphiniums, early Chrysanthemums and other flowers. Silver medal.

Hardy flowers were well represented in the exhibit of Messrs. G. Gibson and Co., Bedale, a considerable number of flowers of merit or novelty appearing in the stand. Silver medal.

Carnations formed the contribution of Messrs. Young and Co., Hatherly, who, as usual, sent a variety of good flowers of the most advanced Perpetual-flowering types. Silver-gilt medal.

Messrs. Cunningham, Fraser and Co., Edinburgh, contributed two fine groups to the show. The first was composed of hardy flowers, Roses, &c., and the other of Hollies—a speciality—and other shrubs and trees. Silver-gilt medal.

A very attractive group of conifers, &c., was set up on the floor of the hall by Messrs. R. B. Laird and Sons, Limited, with which is incorporated Messrs. James Dickson and Sons, Edinburgh. Silver medal.

Messrs. Stuart Low and Co., Bush Hill Park, Middlesex, made a good show with choice Orchids and Carnations, with Apples and other produce of fine quality. Silver medal.

The exhibit of Messrs. James Cocker and Sons, Aberdeen, consisted of an effective and choice stand of hardy border and other flowers. Silver medal.

Messrs. T. Methven and Son, Edinburgh, had a nice group of Lilies, Clematises and other hardy greenhouse plants. Silver medal.

Tree Ivies in the most varied display formed the grand group from Mr. L. R. Russell, Richmond. Silver medal.

The King's Acre Nurseries, Hereford, sent a grand array of Apple and other fruit trees in fruit. Silver-gilt medal.

Messrs. E. F. Fairbairn and Son, and Messrs. G. Fairbairn and Sons, Carlisle, showed Cactus and other Dahlias with Carnations, &c. Bronze medal to each.

Peony-flowered Dahlias were grandly staged by Messrs. Bakers, Wolverhampton. Silver medal.

Messrs. W. Thomson and Sons, Clovenfords, showed Grapes, &c., for which a silver gilt medal was awarded. Sweet Peas were finely exhibited by Mr. R. Bolton, Warton, Carnforth. Bronze medal.

An interesting table of Ferns, Lycopods, &c., with refined Lily of the Valley, came from Mr. H. N. Ellison, West Bromwich. Silver medal.

Messrs. T. Kennedy and Co., Dumfries, sent an exhibit of hardy flowers, Sweet Peas, Dahlias, &c. Bronze medal. Phloxes were well shown by Messrs. Gunn and Sons, Olton. Bronze medal.

Messrs. Little and Ballantyne, Carlisle, staged a fine lot of Apples, &c., all cut from the open. Silver-gilt medal.

From Dundee, Messrs. Thyme and Sons sent a grand lot of Sweet Peas, border flowers, annuals, &c. Silver-gilt medal.

Mr. R. C. Ferguson, Dunfermline, had a varied display of the best Roses. Bronze medal.

Messrs. Mason and Co., Jamestown, staged Pansies, Violas, Chrysanthemums, &c. Bronze medal.

Messrs. W. Wells, Limited, Merstham, had one of their attractive exhibits of early Chrysanthemums, including

Crimson Polly, which has received so many awards this season. Silver medal.

Messrs. T. S. Ware, Limited, Feltham, made a grand display with Begonias, among which Lady Cromer was conspicuous. Silver-gilt medal.

The Edinburgh and East of Scotland College of Agriculture exhibited preserved fruit and specimens of their publications. Bronze medal.

Mr. G. W. Miler, Wisbech, sent Apple Miller's Red Victoria, to which an award of merit was made. Bronze medal.

Mr. Muir, Lindlithgow, exhibited a number of good *Cypripediums*. Silver medal.

Messrs. Sander and Sons, St. Albans, staged a very choice table of Orchids, which included some splendid new varieties. Silver-gilt medal.

Mr. McLeod, Charlton-cum-Hardy, sent a choice lot of Orchids, which were also awarded a silver-gilt medal.

The following other awards were made:
First-class Certificate.—To Montbrétia Star of the East, from Messrs. R. Wallace and Co., Colchester.

Awards of Merit.—To Messrs. Dobbie and Co., Edinburgh, for each of the following: Collarette Dahlias Prince John, Princess Louise and Frogmore, Cosmosses White Queen, Rose Queen and Crimson Queen; Mr. D. W. Thomson, Edinburgh, for Apple Thomas Jeffrey; Mr. G. N. Simpson, Edinburgh, for Tomato Simpson No. 1; Mr. W. Wells for Chrysanthemum *Crimson Polly*; Mr. Fulford, Montgomerie Castle, for Pentstemon Mrs. F. Fulford; Messrs. Mason and Co., Jamestown, for Chrysanthemum Mrs. Mason; and Messrs. J. Cocker and Son, Aberdeen, for Hybrid Tea Rose Mrs. A. Carnegie.

Other exhibits included those of "Gardenalities," Mr. Edwards, the Patent Safety Ladder Company, and Hughes, Bolekov and Co.'s garden furniture.

NATIONAL ROSE SOCIETY.

AUTUMN SHOW.

A MAGNIFICENT display of autumn Roses was to be seen at the National Rose Society show, held in the Royal Horticultural Hall, Vincent Square, Westminster, on September 12. At no previous autumn show have we seen large groups of Roses of such good quality and staged with more consummate skill and taste. These large groups were unmistakably the chief feature of the exhibition, and the banks of well-coloured Roses were pleasing in the extreme. Baskets and vases of Roses, as well as blooms shown on boards, came in for great praise from the admiring public, and the Rose haps, which are so interesting at this season, were well represented in the classes allotted to them. A general review of the show, together with descriptions of new seedling Roses, will be found on page 476 of this issue.

NURSERYMEN'S CLASSES.

There was very keen competition in Class 1 for thirty-six blooms, distinct. Messrs. Hugh Dickson, Royal Nurseries, Belfast, secured the premier award with a remarkably good lot of exceptional colour and substance for the time of year. This board contained particularly fine blooms of *Caroline Testout*, *Lady Alice Stanley*, *W. R. Smith* and *Hugh Dickson*; second, Messrs. J. W. R. Smith and Son, Gloucester. This board was much strengthened by exquisite blooms of *Lyon Rose*, *J. B. Clark* and a well-coloured, but rather thin bloom of *Lady Hillington*. Third, Messrs. J. Cocker and Sons, Aberdeen; fourth, Messrs. Adam and Craigmillie, Rubistaw, Aberdeen.

The first prize in Class 2 for twelve blooms, distinct, was won by Mr. Henry Drew, Longworth, Berks, who showed *Mme. Constant Souperet* and *Souvenir de Pierre Notting* in grand form. Mr. George Prince, likewise from Longworth, was a good second. His stand contained perfect blooms of Mrs. Foley Hobbs, *White Maman Cochet* and Mrs. E. Mawley. Third, Mr. John Pigg, Royston, Herts.

Mr. John Mattock, Headington, was first for nine baskets of cut Roses, showing lovely baskets of *Caroline Testout*, *Hugh Dickson* and *Mrs. Sharnan Crawford*.

In a similar class for nine baskets Messrs. Hugh Dickson, Limited, Royal Nurseries, Belfast, led the way with magnificent baskets of *Lady Pirrie*, *Irish Elegance*, *Betty* and others; second, Mr. John Mattock; third, Messrs. S. Bide and Sons, Farnham, whose basket of *Rayon d'Or* was the admiration of all visitors.

Messrs. W. Spooner and Sons, Woking, were first for five baskets, in which *General Macarthur* stood out prominently; second, Mr. J. C. Crossing, Penarth; third, Mr. H. Drew, Longworth. An extra prize was awarded to Mr. E. J. Hicks, Twyford, Berks, for five very beautiful baskets in this class.

For a basket of twelve blooms Messrs. Frank Cant and Co., Colchester, led the way, closely followed by Messrs. Hugh Dickson and Messrs. McGredy and Son in the order named.

Mr. J. Mattock of Headington, Oxford, scored a triumph in carrying off the first prize for eighteen varieties, distinct. Messrs. Frank Cant and Co. were second.

For nine vases of decorative Roses, Mr. E. J. Hicks took the premier place, showing, among others, three very pretty vases of *Lady Pirrie*, *Lyon* and *Comtesse du Cayla*; second, Mr. Will Taylor, Hampton; third, Messrs. G. and W. H. Burch.

For twenty-four varieties shown in vases, Mr. J. Mattock was first with a grand lot, including *Mme. Jean Dupuy*, *Lady Hillington*, *La Tosca* and *M. Paul Lede*. Messrs. Frank Cant and Co. and Mr. John Pigg were second and third respectively.

Messrs. W. Spooner and Sons, Woking, were first in Class 10 for twelve decorative Roses, their blooms of

Souvenir de M. de Zayas, *Lady Pirrie* and *Miss Dorothy Nocatta* being much admired. Mr. George Prince was a good second, followed by Mr. E. J. Hicks.

Mr. George Prince was more successful for twelve varieties of Dwarf Polyantha Roses, carrying off the first prize. Messrs. W. Spooner and Sons, Woking, and Messrs. B. R. Cant and Sons, Colchester, were the runners-up.

Hobbies, Limited, Norfolk Nurseries, Dereham, were successful in securing the gold medal and first prize for a representative group of Roses arranged on the floor. It was an admirable group and well arranged. Messrs. Paul and Son, Cheshunt, were second with an almost equally good exhibit.

Undoubtedly the finest exhibits in the show were those in Class 13 for a group of Roses on staging. The exhibitors in this class quite excelled themselves in their manner of staging, and the quality of the blooms left little to be desired. Messrs. Gunn and Son, Olton, Birmingham, were first with a gorgeous display, staged in a masterful way. In the background of this group were arches of Rambler Roses, with pillars of blooms surrounding a magnificent centre-piece of the *Lyon Rose*, *Molly Sharnan Crawford*, *A. R. Goodwin* and *Frau Karl Druschki* were prominent among a truly grand collection of varieties. Gold medal. The second prize and silver-gilt medal fell to the lot of Messrs. W. and J. Brown, Peterborough, who staged an even higher lot of arches and pillars, with baskets of Roses in the foreground. The third prize and silver medal were won by Mr. G. Prince for a group of exceptional quality, among which a pillar of *Rayon d'Or* was the centre of admiration. An extra prize was deservedly awarded to Messrs. Benjamin R. Cant and Co. in this class.

Messrs. Harkness and Co., Hitchin, were first for a group of cut Roses (Class 14) with a rather informal group, artistically arranged with baskets of *Lyon Rose*, *Mme. Abel Chateau* and *Lady Hillington* in the foreground. Mr. F. M. Bradley was second, whose group contained a charming combination of colour with *Lyon Rose* and *Irish Elegance*. Messrs. Jackman and Son, Woking, were third. We were well impressed with a new semi-double Hybrid Tea named *Cherry Page*. It is of a brilliant cerise colour, shading to apricot, and was shown in the group staged by Mr. Walter Eastlea, Eastwood, Essex.

For thirty-six varieties, not fewer than three trusses of each. Messrs. Frank Cant and Co. led the van with such capital varieties as *A. R. Goodwin*, *Alice Roosevelt*, *Gottfried Keller* and *Papa Gontier*. Mr. J. Mattock and Messrs. J. Jefferies and Son were second and third respectively.

Considerable interest was displayed in the class for the haps of nine species or varieties. Among those shown we observed the following: *Atropurpurea*, *Sweet Briar*, *rugosa rubra*, *Red Scots* and *Lennox Scots*, the last two having black fruits. Messrs. Benjamin R. Cant and Sons were first in this class, followed by Messrs. Paul and Son, Cheshunt, and Mr. George Prince.

AMATEURS' CLASSES.

There was good competition in almost all, if not quite all, of the amateur classes. The blooms shown on boards were of good average quality, although here and there there were unmistakable signs of weather-beaten blooms. Nevertheless, the exhibits were a credit to the exhibitors, and we were pleased to note that the blooms on boards were not over-dressed, a failing in which the nurserymen had erred sadly. The bowls and baskets shown by amateurs formed one of the most pleasing features of the show. That well-known exhibitor, Mr. Conway Jones of Huclecote, Gloucester, was most successful on this occasion, and his long list of successes included firsts in the following classes: Eighteen blooms, distinct; nine blooms, distinct; seven varieties in vases, three baskets of cut Roses; twelve varieties, not fewer than three trusses of each; and group of decorative Roses (Class 31), besides two medals for the best blooms in the show. His blooms of *Mme. Wagram*, *White Maman Cochet*, Mrs. Foley Hobbs and *Medea* were perhaps the pick of a very fine lot.

Mr. F. Speight, Market Harborough, was first for twelve blooms (Class 20), and Mr. J. Moulles, Hitchin, led the way for nine blooms in the class following with particularly good flowers of *W. R. Smith*, *Mildred Grant*, *Mrs. E. Mawley* and *Caroline Testout*.

In the class for six blooms, distinct, Mr. W. P. Panckridge, Petersfield, was first, showing blooms of exceptional size of *Lady Ursula*, *Frau Karl Druschki* and *Florence Pemberton*. The same exhibitor was first for five varieties shown in vases. Among other successful amateur exhibitors were the Rev. J. H. Pemberton, the Rev. F. Page-Roberts, the Rev. F. R. Burnside, Messrs. L. P. Roberts, S. W. Burgess, H. R. Darlington, Edward Mawby, E. B. Lindsell, G. A. Hammond and F. Slaughter.

The table-decorations shown in the Lecture Room on the first floor provided some of the most charming colour studies that we have ever seen. It was remarkable to note with what good taste the single Rose *Irish Elegance* could be used. It was this variety that dominated at least half of the tables in competition. The first prize was won by Mrs. Robinson, Park Hill, Carshalton, with a graceful table comprising the *Lyon Rose* and *Irish Elegance*. The colours of these two varieties enter into perfect harmony. Rose foliage and light Asparagus plumes were used as foliage. The second and third prize tables were both composed of *Irish Elegance*, with its own foliage, and were shown by Mrs. Hale, Warminster, and Mrs. J. W. Smith, Bushy Heath. An extra prize for a table decorated with the new variety *Sunburst*, with *Maidenhair Fern* and *Rose foliage*, was awarded to Mrs. Bide, Uxbridge.

THE GARDEN.

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SEPTEMBER 28, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Notes on Newer Roses.—Those of our readers who are keenly interested in Roses will be pleased to learn that we have persuaded Mr. H. E. Molyneux to once more contribute his "Notes on Newer Roses." The first instalment of these notes will appear in our next issue.

A Pretty Autumn Effect.—When visiting the gardens at Carrow Abbey, Norwich, a few days ago, we noticed a narrow border, running alongside a warm greenhouse, filled with Amaryllis Belladonna and edged with the pretty little New Zealand Windflower, Zephyranthes candida. Although the Amaryllises were not out to perfection, enough were there to indicate that the combination of these two plants would be excellent, the white, star-like blossoms of the Zephyranthes harmonising well with the soft pink of the Amaryllis. The narrow, deep green foliage of the Zephyranthes also tended to take away the bareness of the soil that is always an eyesore when the Amaryllis is grown by itself.

A Woodland Bed in Autumn.—Those who are thinking of planting large beds of flowers by woodland pathways would do well to consider the merits of the stately Kniphofias or Torch Lilies for the purpose. A short time ago we noticed a very beautiful effect created by the use of that excellent Torch Lily John Benary. A large bed had been made in the grass by the side of a long, gravel pathway, and just behind the bed was a lofty Beech tree with a large, clean trunk. The bed had been filled with the Torch Lily, and the effect, when seen from a distance, was very pleasing indeed, the trunk of the Beech tree appearing to rise out of the bed of flowers. An Ash, Chestnut, or even an Elm tree would produce much the same effect, providing the trunk was clear of branches and the bark moderately smooth.

Colchicums and Autumn-flowering Crocuses in Grass.—Although everyone who has a garden of any pretensions tries to produce a beautiful floral feature during the early months of the year by naturalising bulbs in grass, few people take advantage of the autumn-flowering Crocuses and Colchicums to produce a similar effect in September and October, yet a very striking picture may be made by their aid. Planted among grass they thrive quite as well as the spring-flowering kinds, and require similar treatment. The colours vary from crimson to white in the Colchicums, and from blue to yellow and white in the Crocuses. Colchicum autumnale and its varieties C. speciosum, C. byzantinum and C. variegatum may all be used, while good Crocuses are C. speciosus, C. longiflorus, C. pulchellus, C. sativus and C. asturicus. Some bulb-dealers make a speciality of supplying mixed hulbs of both genera for naturalising.

Campanula carpatica White Star.—This is certainly one of the finest of the turbinate section of the bell-flowering family, flowering in late August and continuing into September. Save for a goodly suffusion of blue, which is always increased with age, the flowers are almost white, and at a short distance pass muster as such. In any case it is a good plant, not much more than 9 inches high when in full vigour and very freely flowered. Like many another of the same race, it loves a cool spot and a rather strong loamy soil. The flowers are nearly two inches across.

The Gardens at Regal Lodge, Kentford.—In the description of these gardens, which appeared in our issue for September 7, we omitted, owing to a misunderstanding, to mention that some of the main features, including the loggia, Lily tank and sunk garden, the paved terrace, herbaceous borders and pleached alleys, were originally planned by the Hon. Mrs. Grosvenor, whose skill as a garden artist is well known. Although we understand that considerable alterations have been effected in the gardens by Lady de Bathe since they were originally designed, we think it is only right that credit should be given to the Hon. Mrs. Grosvenor for her excellent initial work.

A Good Trio of Dahlias.—Many of the numerous varieties of single Dahlias are unsurpassed for garden decoration. For profusion of blossoms their closest rivals are the Pompon section. As they seed freely, it is very necessary to remove the old flowers at frequent intervals. For beds and borders three of the best single Dahlias grown are White Queen, Miss Roberts (rich yellow) and Rosebank Cardinal (red). All three average from 4 feet 6 inches to 5 feet in height. The flowers of the yellow and red varieties are about three inches across, those of the white rather more.

The French Gorse.—In many parts of the country the French Gorse (Ulex Gallii) is very effective at the present time, for, in company with Ling and Heather, it brightens up many a common and hillside. U. Gallii may be easily recognised not only by its flowering in autumn, but by its habit being dwarfier and more compact than that of U. europæa. On some of the commons in the Southern Counties, where the young shoots are cropped off by sheep, it becomes in time quite dense and forms round, cushion-like masses a foot or so high. These at the present time are a mass of gold, for the fact of the shoots being injured occasionally does not appear to affect the flowering. Apart from its beauty in a wild state, it is an excellent plant to introduce into the garden, especially where a dry bank has to be covered, for it may be grown successfully in quite poor soil, and if cropped over once a year may be induced to adopt the stunted character, in which condition it is seen to advantage. By mixing it with Heather and Ling in irregular fashion, a charming natural effect is obtained.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Hardy Japanese Shrub.—In the September 7 issue of THE GARDEN, page 447, Mr. S. Arnott would like to know of the hardiness of *Cercidiphyllum japonicum*. It is such a beautiful and graceful shrub that one would be more than sorry to hear it was not hardy. A plant growing here has shown no signs of being in any way tender. The plant is about five feet high and four feet through, making a lovely bush and vigorous growth. It was unhurt by 24° of frost last winter, and came through late spring frosts unscathed when *Kalmias* and *Azaleas* were nipped. Winds have had no effect on the plant here, but certainly it is to some extent sheltered from north and east.—W. D. BESANT, *The Curragh Grange Gardens, The Curragh, County Kildare.*

A Cheerful Autumn Flower (*Sternbergia macrantha*).—There is no more cheerful-looking flower in our gardens in autumn than *Sternbergias*, with their bright yellow Crocus-like flowers. *Sternbergia macrantha*, which is now in bloom, is undoubtedly the finest of the whole genus; it differs from the familiar *Sternbergia lutea* in its larger flowers, long perianth tube, and in producing leaves in spring, instead of with the flowers in autumn. In its native habitat it is very widely distributed, extending from Persia to the east as far as Smyrna, and southward as far as Jerusalem. It is an excellent plant for pots in a cool greenhouse, and equally as good for a sheltered border outside or a sunny nook in the rock garden.—F. G. P.

Crocus Species and Rare Shrubs.—I see in September 14 issue, page 461, an article signed "P. J.," in which he writes of not finding the species *Crocus* in any of the trade lists. He may like to know that Messrs. Barr have them catalogued in their ordinary bulb list, as well as issuing a special list, and a very comprehensive one, in the summer. I thoroughly endorse all that "P. J." says of these Crocuses. Personally, I greatly prefer them to the Dutch varieties. They look very well, as I have them, as a thick carpet to *Erica carnea* and *E. mediterranea hybrida* in small beds in a paved garden for winter effect. I have also recently seen correspondence questioning the hardiness of certain shrubs, such as *Choisya*. My experience may perhaps reassure those who hesitate about planting them. I live on the top of a hill, where we seem to be exposed to every wind that blows. The soil is a cold, clinging clay. I am an absolute amateur, do not employ a trained gardener (only a labourer for trenching work), and had never had anything to do with gardening until I determined to make a garden out of our wilderness here five or six years ago. So, if I can succeed, I am sure anybody can, especially as I do not by any means devote all my time to it. I have every piece of ground where I am going to plant bastard-trenched to a depth of 3 feet. Where the soil is very bad, I fully trench it 3 feet deep. I lighten the soil with leaf-mould, mortar rubbish, lawn-mowings, vegetable refuse, horse-manure, and I burn some of the clay and turn it into red earth. Of course, special plants get special diet. The others have to lead the simple life and put up with a merely trenched soil, as I have to be very economical in the matter of manures, leaf-mould, &c. *Solanum crispum*, which I planted as a little thing about five years ago, is now over eight feet high and as much through. I protected it

the first two years with matting in the winter, but since then it has been too big to do anything with, so I have left it alone. I have also two fine bushes of *Choisya ternata*, which are never protected and flower beautifully; also one *Fremontia californica*, which grows in the same border as the *Choisya*, protected from north and east and open to the south. *Olearia Gunnii*, also in the same border, is likewise a mass of bloom in early summer. It is very effective with a grouping of *Iris*s near it.—ST. PAUL'S WALDEN.

Hardy Fuchsias.—With the exception of *Fuchsia gracilis* and *Fuchsia Riccartonii*, the several hardy varieties do not get the attention they deserve, as they are all exceedingly beautiful, and there is now a great variety to be found among them. Mr. L. R. Russell of Richmond has at some of the recent meetings of the Royal Horticultural Society shown us the numerous forms that are at the present time available. As pot plants, however, beautiful though they be, they do not appeal so markedly to one as when they are planted out in the open ground. During a visit paid a few days ago to Messrs. Veitch's nursery at Coombe Wood, my attention was arrested by the beauty of the hardy Fuchsias. There a long, undulating border, planted with an extensive collection of choice shrubs, was lit up here and there with numerous specimens of the hardy varieties of Fuchsias, which supplied a wealth of colour when most of their associates were out of bloom. Besides the two varieties mentioned at the head of this note, such kinds as *americana elegans*, *corallina* or *exoniensis*, *coccinea*, *globosa* and *Thomsonii* were noted. Some of M. Lemoine's hybrids were also conspicuous, especially *Enfant Prodigue*, with fairly large, semi-double flowers, whose sepals are red and the corolla purplish. Mme. Cornillon, sent out about fifty years ago, arrests attention by the fact that it is the only hardy variety with a white corolla.—H. P.

Sweet Pea White Queen.—I always read the Sweet Pea notes by Mr. Horace J. Wright in your valuable paper with particular interest. Mr. Wright speaks of bewilderment in approaching lists of varieties, and it is with reference to one of the newest of these, viz., *White Queen*, that I would refer to his remarks on page 466, issue September 14. The merits of a white Sweet Pea are more easily understood on paper than those of any colour, and Mr. Wright says of *White Queen* that the form of the flower is excellent, and that the blooms are admirably set on the stem, and that the plant is a thoroughly good grower. May I ask in what way these virtues render *White Queen* conspicuous or new? I am sure you will acquit me of any desire to obtain free advertisement when I say that *Paradise White Pearl* is in my mind as having, since its introduction two years ago, already brought these advantages and more before the public. By the "more" I refer to purity and substance. The former is certainly not a feature of *Moncymaker* and others, while substance all the old waved whites have lacked, and I am sure that *White Queen* lacks it also unless, *mirabile dictu*, it has the same pedigree as *Paradise White Pearl*. To give you and your readers an opportunity of judging how far my claim is likely to be well founded, I am willing to disclose the pedigree of *Paradise White Pearl* if the introducer of *White Queen* will do the same. It is not without hesitation that I make this offer, but I am so curious to know whence *White Queen* gained in substance that I am willing to disclose my little secret.—HILDA HEMUS.

Rose Sunburst.—In answer to your correspondent "G. T. W.," page 474, issue September 21, I have found this *Rose* varies greatly in colour and quantity of petal. My first crop came thin, but the most beautiful colour, i.e., richest apricot; the next full in petal, but outer bleached halfway down (the exceptional weather may account for Blossoms grown under glass are not always free from this fault. I shade immediately the buds show colour. This to many may be against this *Rose*, but to catch its intense apricot hues amply repays. If your correspondent is fond of yellow *Roses* and has not grown *Alice Rothschild*, *Mabel Drew* and *A. H. Grey*, might I strongly recommend him to do so, as I have found them splendid growers, the flowers of excellent shape and plenty of them, lasting well in water, good resisters of mildew, especially the last-named, and, what is most exceptional with yellow *Roses*, the colour does not "fly," but deepens with expansion.—WEST WORTHING.

The Sporting of Californian-grown Sweet Peas. The subject of the sporting of Californian Sweet Peas, raised by several correspondents, is one of interest to all lovers of this flower. Why, however, limit the observations to Californian Sweet Peas only? I ask this question because, until I hear of conclusive evidence to the contrary, I shall believe that the same laws governing this matter hold in California as they do here. One has often seen it advanced that different insects abound abroad to what are seen here, and that they may have a different way of working to those in our own country. Personally I cannot follow this, as even if they do work differently and actually enter the flowers and carry away pollen to other flowers, my experience, of many years' standing, teaches me that they might bring about cross-pollination but not cross-fertilisation—a very different matter. The fertilisation has taken place before this pollen is transferred, and would have no more effect than so much inorganic dust. I have never, in all my experience, come across a case of "sporting" which I could trace to natural cross-fertilisation. There is a lot of nonsense talked about insects and their effect upon cross-fertilisation. I admit they do bring it about in many flowers, but it is much rarer than is supposed. Is it likely that Nature would rely upon the chance visitation of an insect to ensure the perpetuation of any species of plant? Nature does not believe in the haphazard. We have been so accustomed to take for granted all we read of the conclusions of such men as Darwin that we have, very few of us, taken the trouble to see whether such conclusions are correct. Eminent scientific writers have done the same, hence too much stress has been laid upon the importance of insects to flowers. Because Darwin and others have noticed certain things to take place at different times they have concluded that it always happens, and is the universal law of Nature with regard to the particular plants observed. This, however, is a digression. I think several of your correspondents hit the nail on the head when they infer that there is not as much care shown in the growing of Californian stocks as in this country. They are grown without sticks upon a huge scale, and cannot be as carefully superintended. Growers know well that one has to pass along rows scores of times before all rogues come out. You might miss one many times. If this is so when grown upon sticks, what about those growing low down, to which the Chinaman has to bend in the heat of a scorching sun. Is it to be wondered at that many are left?—H. E. WARD.

Schizanthus grandiflorus maximus (Dr. Badger's hybrids).—Under this name an exhibitor sent a number of varieties of *Schizanthus* to the recent Edinburgh show. No particulars were attached, and no information was forthcoming as to the parentage of these flowers. They are large and well coloured, but do not show any signs of hybridising. Are not these simply selected varieties?—VISITOR.

New Early-flowering Carnations for the Border.—Quite a feature of the fine exhibit of the Scottish firm of Storrie and Storrie at the recent show of the Royal Caledonian Horticultural Society in Edinburgh was a group of what were called "Præcox Border Carnations." A large number of plants were shown, these being raised from seeds sown in February, and which have been in flower for some time. Included in the exhibit were several boxes, into which a number of the plants had been pricked out 2 inches apart from the seed-pans. These were in flower also and producing really good blooms. As compared with the Marguerite Carnations, to which these flowers would seem related, the Præcox varieties are much better in form and have more refined flowers. The colours are extremely varied, and a special feature one observed was the small proportion of single flowers, even among the plants which had been left in the seedling-boxes. Mr. David Storrie may be congratulated on these Præcox Carnations.—S. A.

The Original China Aster.—Until a few years ago the type of the various cultivated forms of the China Aster (*Callistephus hortensis*) was practically unknown in our gardens, for although it had been grown many years ago, the double-flowered varieties had quite supplanted it. Upon its reintroduction it quickly found favour with horticulturists, for its elegant habit and large heads of flowers, composed of pretty mauve ray and yellow disc florets, made a very pleasing combination. Moreover, it was found to offer excellent possibilities for landscape effect when sown with a generous hand in the wild garden, and many extensive areas have been seen covered with it in autumn at Kew and in other gardens within recent years. When first reintroduced it came quite true from seeds, but a few years' cultivation appears to have exerted some strange influence upon it, which makes the colour of the flowers vary considerably, and mauve, white, purple, pink and red forms may be obtained from a packet of seeds. A large mass near the Isleworth Gate at Kew may be seen in full flower at the present time, many shades of colour being represented. The effect is one which might well be copied by people who are fond of touches of colour in woodland scenery at this time of the year.—D.

ROCK AND WATER GARDEN.

THE BEST SAXIFRAGES AND HOW TO GROW THEM.

(Continued from page 476.)

IN fulfilment of the promise made in THE GARDEN of the 14th inst., I will now briefly refer to some of the choicer sorts, best suited, by reason of their early flowering rarity, diminutive growth, or other good quality, for pot cultivation in frames, or, preferably, where such exists, to figure in that model, moderate, unheated structure we know to-day as the "alpine-house," and which year by year is becoming more essential in all gardens where the best of these plants are cultivated. This does not of necessity infer that protection of this or of any other kind for alpine vegetation is new—far from it, since growers of repute of forty years or more ago not only gave it, but regarded it as essential to the bringing out of all that is best in these plants. Such men as James Atkins of Painswick, Mr. Joad of Wimbledon, and Latimer Clark of Sydenham

protecting these plants was so simple that I have frequently recommended it, and do so again to those readers of THE GARDEN who love these alpine—and they must be a considerable number—and to whom the winter beauty of such things is only exceeded by their flowering.

Naturally, to those who can afford it, the alpine-house is far better, because the plant-lover is brought into closest communion with the flowers of his choice. In recommending a glass structure for alpine plants I know I am treading heavily on the corns of some hardy plantsmen who detest a glass covering of any description. But what of that! Is it better to expose them to all the changes and chances of an English winter, and to see them day by day bereft of all their winter beauty and charm, or to afford them the protection they need and enjoy the best they are capable of giving? Dame Nature in winter-time keeps these children of the mountain snug and dry and warm beneath a great coverlet of snow, while in this country during the same period they would probably be fog-smitten and rain-sodden for weeks on end, and of no beauty to be desired.



CHINA ASTERS IN THE WOODLAND.

Hill, pioneers and past-masters of alpine cultivation in their day, all afforded protection to their choicest and best, not because of any misguided notions as to the complete hardiness of the subjects, but because they first realised, and proved to demonstration afterwards, that only by some such means was it possible to have revealed the best the plants were capable of giving.

The first time I saw the Painswick collection was in winter, when the choicest of the Encrusted Saxifrage were sheltering in a frame composed of stout side planks 9 inches deep, and equally stout wooden ends, into which a grooved ridge was fixed centrally at 2 feet high for receiving the glass to form the miniature span-roofed greenhouse, or frame it really was. The angle formed would be 45° or more, so that all possible light was ensured. The plants were in pots and pans, each a delightful specimen of its kind, and, judged by an encrusted beauty I never forget, were apparently revelling in the clear, pure air characteristic of the favoured Cotswold village referred to. The method of

We do not grow these plants merely to test their powers of endurance, but to get all we can out of them and for the longest period of time, and the alpine-house is the best way. For such a structure the essentials are an open position and the fullest light and ventilation. There must be no misguided notions as to artificial heat, which is not only unnecessary, but is calculated to disfigure and to destroy. Damp, too, is a great and ever-present enemy of an English winter; hence the house should never be closed, but ventilated freely at all times. Under such conditions, success is more than half assured at the outset. Moreover, such a structure ranks high economically—no fuel, no heating apparatus, no frost or thermometer to study, and, best of all, none of the vile abominations of the oil lamp, from which so many plants grown in the warmed greenhouse of the amateur suffer to-day. A 25-foot-long by 10-foot-wide house will accommodate a host of alpine, and one-half the length quite a large collection. Details of size, however, are not for me to decide.

FORTHCOMING EVENTS.

October 1.—Scottish Horticultural Association's Meeting.

October 2.—National Vegetable Society's Show at Watford. National Chrysanthemum Society's Exhibition at the Crystal Palace (two days).

October 5.—Société Française de Horticulture de Londres Meeting.

To begin with, the amateur, if he would have specimen plants, should provide himself with a series of dwarfed pots or special pans, those having a depth of 5 inches and a diameter of 8 inches being suited to a large number. A well-made-up pan of an alpine should approximate as near as may be to a well-arranged colony on the rockery; that is, those of diminutive stature should be seen jutting out from between miniature pieces of rock, while the true carpeters, *Salomonii*, *apiculata*, *sancta* and others, should be permitted to clothe the entire surface of the soil. Even the *Aizoons*, robust and free of growth as they undoubtedly are, play quite a new role in the alpine-house, the silvery braided or hoary-leaved sorts being more pregnant of life and beauty. Such giants as *S. Cotyledon* and *S. longifolia* should be grown as single specimens in pots of the ordinary kind.

In the matter of soil, a gritty loam with perfect drainage will suit the majority, while the addition of much sand or old mortar will not be in vain. In the subjoined list will be found a selection of

THE ROSE WALK, PURLEY.

THOSE readers who are members of the National Rose Society will remember, perhaps, that under the heading of "An Interesting Experiment in Estate Development" I contributed to the "Rose Annual" for 1900 a short description of the above walk, then just completed.

Since that date the Roses have matured, and this season were particularly fine. The accompanying illustrations give one some idea of what was a continuous picture along both sides of a road some half-mile in length, and the general effect of which is easier imagined than described. At their best in the last three weeks in June and the first fortnight in July, still, at all seasons of the Rose year, namely, the six months from May to November, Roses are to be found, and it must be a source of continual pleasure and satisfaction to the original



I.—A PORTION OF THE ROSE BORDER AT PURLEY, SHOWING BLUSH RAMBLER AND DOROTHY PERKINS OVER RUSTIC FENCING.

the choicer kinds suited to alpine-house or frame, some of which occur also in the earlier articles on this subject. Those marked by an asterisk grow freely in sandy loam of a quite ordinary character. **Saxifraga Aizoon* in variety, **S. apiculata* (yellow), *S. aretioides* (yellow), *S. Boydii* (yellow), *S. B. alba* (white), *S. Borisii* (white), *S. burseriana major* (white), *S. b. Gloria* (white), *S. b. magna* (white), *S. casia* (white), *S. calyciflora* (crimson), **S. catalaunica* (white), **S. cristata* (white), **S. crustata* (white), **S. Cotyledon* in variety (white), *S. diapensioides* (white), **S. Elizabethæ* (yellow), *S. Griesbachii* (crimson), **S. Hostii* (white), *S. kolanatiana* (pink), **S. Kotschyii* (yellow), **S. lantoscana* (white), **S. l. superba* (white), *S. longifolia* (white), *S. marginata* (white), *S. oppositifolia* (all-red and white), **S. pectinata* (white), **S. rocheliana* (white), **S. r. coriophylla* (white), *S. scardica* (white), **S. sancta* (yellow), **S. Salomonii* (white), *S. Obristii* (white), *S. Paulinæ* (yellow), *S. squarrosa* (white), *S. valdensis* (white), **S. cochlearis* in variety (white), *S. thessalica* (reddish) and *S. Petraschii* (white).

E. H. JENKINS.

owner, and even more so to the many present owners, that the experiment, if it can be so called, has turned out such a great success.

As seen on my last visit (the day of the Purley Horticultural Society's show) one saw plenty of flowers that would have put to shame many of the Roses exhibited in the prize boxes in the tents close by, and the display of decorative Roses, climbers more particularly, perhaps, was exceptionally fine. Though many of the *wichuraianas* had yet to reach their highest phase of possible beauty, yet the first blooms were there and the promise of many more to come was apparent; in fact, the Roses generally looked (as all Roses should look and do look when and where they are properly cared for) in robust health and vigour, thoroughly enjoying the conditions under which they were growing and returning thanks for the same in their unspeakable but none the less impressive fashion. I close with a brief description of the Rose walk and how it was formed.

Within a mile of Purley Station and less than thirty minutes' railway journey from Charing Cross,

on a plateau at a considerable elevation, has been formed a road some half-mile in length, on each side of which have been planted some thousands of Roses. Admittedly the site, an old pasture of many years' standing, was a favourable one, with a stratum of clay (light) over a subsoil of chalk. The whole of the top spit was removed from the surface of the road, and beds were formed some twenty-five feet wide throughout the entire length of the road, with alternate layers of loam, clay and manure, the whole thoroughly mixed. With this careful preparation success was deserved, at any rate. The road itself was extremely well made, the idea being to form the finest carriage-way in the district, and all sewers, gas and water mains, electric light cables and telephone wires have been laid in it to prevent that constant picking up so detrimental to newly-formed roads. I mention this to show what care and attention was bestowed on the whole scheme. The road is 40 feet wide, with wide paths, which have sloping grass banks, at the top of which is a light wire fence, then a grass walk (for private use only) and then the Rose-beds. The Roses have been planted in the following manner: At the back, climbing Roses on pillars and supports (see illustration No. 1), with an occasional weeping standard (see illustration No. 2), planted about six feet apart. Three feet in front of them are standards, half-standards, dwarf pillars and stronger-growing bushes. The second row consists of dwarfs of all kinds, exhibition, garden and decorative varieties; and the front row, *Chinas*, *Pompons* or *Dwarf Polyanthas*, and the dwarf-growing *Hybrid Perpetuals*, *Hybrid Teas*, &c. Planted in 1907, they have grown well, and the road is worth going a long way to see. Among other interesting features are the picturesque cottages at each end adjoining the gates, one a typical Surrey cottage, the other Sussex.

These notes are written in the hope that other landowners may copy the idea and so increase the culture of our national flower.

Southampton.

H. E. MOLYNEUX.

THE FLOWER GARDEN.

EARLY-FLOWERING OUTDOOR CHRYSANTHEMUMS.

THE few enthusiastic growers of the eighties are largely responsible for what we see of the early-flowering outdoor Chrysanthemums to-day. Notwithstanding the fact that the exhibits which were put up in the earlier days were often described by many as dull, dowdy and uninteresting, they were the beginnings of better times, as subsequent events so emphatically proved. M. Simon Delaux, a French raiser, used annually to send out batches of so-called early sorts, but few of these were of any use, as most of them flowered in late October—fully a month later than is desirable for outdoor displays in the United Kingdom. In the early nineties, however, this raiser sent out considerably more than one hundred Continental novelties in one year, and as far as the writer's memory serves him, not more than two trade specialists acquired the whole set. They were such a fine lot, however, that the collections of early-flowering Chrysanthemums throughout the country came to be enriched by their addition, and the aspect of the outdoor flower garden changed in a remarkable degree in consequence.

In 1894 plants of Mme. Marie Massé were first introduced, and so great a development did the introduction of this fine variety denote that it was grown by everybody, who at that time began to realise what a great advance it was upon any other variety then in commerce. It was the writer's good fortune to exhibit for the first time in this country flowers of Mme. Marie Massé, and to gain the first-class certificate of the National Chrysanthemum Society. At that period this variety was regarded as ideal, for it flowered most profusely, possessed an ideal branching habit, and its constitution was robust and vigorous. The rosy mauve colouring was appreciated at that period, as there was nothing in cultivation to equal it. In succeeding years this variety sported in quite remarkable manner, giving us in turn white, crimson (brunze crimson), cerise, yellow and a number of other intermediate tones of colour, each of which was highly valued as it came along. All these sports are still grown very largely. Once the stock was acquired, it was impossible to lose it, the constitution being so very excellent.

With the introduction of Mme. Marie Massé, English gardeners began to realise that they could save their own seed and raise seedlings of their own, and in consequence of this important fact succeeding years saw the introduction of many very beautiful sorts that completely eclipsed the results obtained by their Continental rivals. Pollen was so easily procurable from flowers of Mme. Marie Massé that numerous crosses were made, and for years it was possible to trace the parentage of the different new sorts to the variety already mentioned or to its progeny.

During the last decade English gardeners added many charming varieties to the lists of cultivated sorts, and of these, together with the introductions of M. Nonin, a French raiser of repute, there is now available for those who care to grow these plants a very lengthy list of early-flowering border Chrysanthemums that should satisfy the taste of the most fastidious. The flowers to which reference has been made in the foregoing notes are of Japanese form, and this has added very materially to the increased popularity of the subject. The old Pompons, beautiful in many respects when properly grown, are now seldom asked for, and this is a real pity, for they have a value peculiarly their own, being dwarf in most instances, and the plants are freely studded with dainty little button flowers that withstand the trying effects of rain as no other type of the flower is able to do. The Pompons look well when massed in beds by themselves, grouping the plants a colour in each bed, or associating those together that make a pleasing contrast. The Pompons never look better than when they are utilised as a groundwork in large beds, in which are planted at irregular intervals or in small groups disbudded

plants of such varieties as the yellow Soleil d'Octobre or its bronzy fawn sport, Bronze Soleil d'Octobre. In this method of planting I saw last season one of the prettiest displays of outdoor Chrysanthemums ever met with in this country. For this reason I would not discard the Pompons.

In later years the early-flowering single Chrysanthemums have come into being, and in a large measure they have revolutionised things. From the first they have been popular, and the quality, even of the earliest sorts, has been quite good. Needless to say, in their development the results have been marvellously good. The form of the flower has improved in a most marked degree,

the frosts cut the plants down. These plants will successfully resist the ill-effects of several degrees of frost. It is only when heavy rains fall persistently, and are succeeded by rather severe frost, that the double-flowered sorts begin to lose their beauty and succumb. And what plant can be expected to succeed in such circumstances? A matter for surprise is the fact that comparatively few professional gardeners appear to set a right value upon these plants, and yet they are capable of supplying the requirements of the house for quite a long period. In the comparatively few gardens wherein I have seen these plants grown extensively, those in charge of the gardens have always been loud in praise of them. The early-flowering Chrysanthemums are plants of the easiest culture, and only need quarters that are deeply dug and the soil nice and mellow. Except for staking and tying the plants, little else is required by them during the growing period. Covent Garden Market and other flower markets throughout the country have developed an enormous business since these plants have been improved, and it is by no means uncommon to meet with market-men who cultivate the early-flowering Chrysanthemums by the hundreds of thousands. The National Chrysanthemum Society holds its show of early sorts at the Crystal Palace on October 2 and 3 next. D. B. CRANE.



2.—A WEEPING STANDARD OF ROSE DOROTHY PERKINS IN THE BORDER AT PURLEY. THE BORDER IS EDGED WITH ALYSSUM MARITIMUM. (See page 488.)

and the flowers stand wind and weather so much better than the earlier series were able to do. The habit of growth varies. In some varieties it is fairly dwarf and bushy, and in others the habit is taller and more erect, evolving flowers on a good length of footstalk, so that individual blossoms can be used for decorations. As freely-flowered, undisbudded sprays these early-flowering single Chrysanthemums provide abundant material for indoor decorations.

It is their value in the outdoor garden, however, that growers have come to recognise. Amateur gardeners have for long taken full advantage of this subject, and, as a rule, their gardens have been a blaze of colour from late August onwards until

some flower-lovers who look upon the Dahlia as a very commonplace flower and as being quite unsuitable for decorative work of any description. But I should like to ask these people if they have ever tried the Dahlia as an effective bedding or border plant? Certainly a few of our large public parks and Kew are endeavouring to educate the world at large as to the value of this flower for colour effects, but only a tithe of the people see them, so progress is slow.

Again, I fear the majority of Dahlias are bought through seeing them at flower shows, and these are nearly always exhibition flowers that are rarely adapted for colour effect, and when planted the owner is disgusted because the only

DAHLIAS FOR COLOUR-SCHEMES.

I HAVE often wondered why lovers of garden colouring have avoided the Dahlia in their autumn colour-schemes. I can only suggest that it is prejudice on the part of most people, for one often hears the remark that they are such stiff, awkward flowers, and are only fit for florists and amateurs to exhibit at flower shows, while others will tell you that Dahlias are always suggestive of earwigs. Personally, I am under the impression that half the flower garden lovers have a very slight knowledge of the modern flower, for they only obtain their information by seeing a few odd plants in cottage gardens, or a few ancients that grow year after year on the borders of country railway stations, while there are

result produced is a mass of greenery. The plants can be had in flower by the middle of July onwards until the frost cuts them down. This in average years is usually the first week in November.

There is no autumn flower that can vie with the Dahlia for brilliancy. As a rule, all others appear dull in comparison. For massing we have scarlet, crimson, yellow, purple, orange, white and pink in self colours. These lend themselves readily to almost any garden colour-scheme if only the right varieties are grown, while they can be utilised almost anywhere, as they vary in height from 2 feet to 5 feet. Should the plants be required to flower in July or very early, the best plants for the purpose are old stools, which should be divided as small as possible, or perhaps better still, pot tubers, which are obtainable in the early spring months. These flower earlier than plants produced from cuttings, though the individual flowers are not so perfect, and, generally speaking, the double forms are liable to produce semi-double flowers, but for colour effect this is immaterial. Pæony-flowered Dahlias are very useful. The individual flowers

Garden Yellow is the best of its colour in this section, though Caradoc runs it very closely. In mauve shades Mauve Queen can be recommended. Perhaps the best crimson for our purpose is Conquest. This is very rich, with a splendid habit. The finest of the very dark forms is still the old variety J. H. Jackson. In bright crimsons Mary Purrier is quite the best. In cases where dwarf colour effects are desired, the bedding double varieties produce splendid masses of colour. They rarely exceed 2 feet high. Marguerite Bruant and White Bedder are both good whites. King of Dwarfs is a good purple. Flora Macdonald can be recommended as a fine yellow, while Rising Sun produces masses of scarlet flowers. The Pæony-flowered varieties have not been noted for their habit, because the flowers are so heavy. They have a tendency to hang down, but it is only a matter of time before we shall have varieties with excellent stems. At the present time a few of the best sorts are Bayard (red and yellow), Mrs. J. B. Riding (scarlet), Cecelia (yellow), Salome (buff apricot), Holman Hunt (crimson) and Mrs.

outskirts of the woodland there are few subjects that lend a more pleasing touch of colour in the autumn. Moreover, the Irish Heath is suitable for growing on rockwork or on sunny banks. It thrives in a sandy peat soil to which a little loam has been added. The name of this useful plant has so often been changed that a good deal of confusion still exists. Its Linnean appellation is *Erica Dabœcii*. In gardens it is sometimes met with under the name of *Menziesia*. *Boretta* is another name by which it is known, but most botanists and gardeners seem now agreed that its name is *Dabœcia polifolia*. It is a low-growing Heath, usually less than two feet in height, bearing drooping crimson-purple blooms considerably larger than those of the usual run of *Ericas*. The white variety seen in the foreground of the illustration is more showy than the type, and flowers with greater freedom. This Heath is found growing wild in Mayo and Connemara; hence its popular name of Irish Heath. Its natural distribution, however, is a little curious, since it also occurs in the Azores, a volcanic group of

islands in the Atlantic about one thousand miles from the coast of Portugal. However, this fine plant is perfectly hardy, and may be planted with confidence in any part of these isles so long as the soil is suitable for the cultivation of Heaths.

COLOURED PLATE.

PLATE 1455.

NEW WINTER-FLOWERING BEGONIAS.

A SPECIES that has played a very important part towards the production of the many winter-flowering Begonias of to-day is *Begonia socotrana*, which, valuable itself for its high ornamental qualities, is rendered ten times more so by reason of the importance of its numerous progeny. From the first it promised to be of considerable value to the hybridist, and was employed in various crosses.

The first result of this was the variety John Heal, named in honour of the raiser. It flowered in 1883, and was distributed two years later, when it was given a first-class certificate by the Royal Horticultural Society. This was obtained from *Begonia socotrana* fertilised with the pollen of a red-flowered tuberous-rooted variety, Viscountess Doneraile. Working more or less on the same lines, a great number of beautiful varieties were raised, and many of them are now extensively grown wherever flowering plants are in demand. Of the several kinds, the brilliant rose carmine coloured Mrs. Heal remained for a long time the best of the section. So matters stood until the autumn of last year, when, at the meeting of the Royal Horticultural Society on November 7, the veteran raiser, with a quiet confidence which betokened success, brought forward three new varieties, namely, Acquisition (bright pink, with a slight yellowish suffusion), Her Majesty (warm orange, with a reddish tinge towards the edges) and Exquisite (deep pink, with the edges of the petals darker, and a shading of orange, especially towards the centre). All three were obtained by the inter-crossing of *Begonia socotrana* and a yellow



DAHLIA KAISERIN AUGUSTA VICTORIA, A FREE-FLOWERING WHITE VARIETY FOR THE GARDEN.

may not be perfect in form, but as a mass of colour they are perfect. Even the double or show varieties produce wonderful colour effects when growing in masses. Where whole beds are devoted to them, only one variety should be grown in each bed, so that they are uniform in height and habit. Just a few of the best decorative kinds are: Kaiserin Augusta Victoria, not the Pæony-flowered variety, but a pure white decorative kind that grows about two feet to three feet high. This has been largely used at Kew and other places, and is always greatly admired. Pure pink is not often seen in the Dahlia, but we have it in the decorative variety Delice. This is a good sturdy grower that flowers on stiff stems well above the foliage. Massed in numbers the effect is perfectly charming. Scarlet is always admired, especially in the autumn months. Here we have the Cactus variety Amos Perry, which is still unsurpassed in its colour and habit; while the best white variety in this section is undoubtedly White Ensign, for it produces its white blossoms well above the foliage on fine stiff stems, which cannot be said of any other white Cactus I know.

T. G. Baker (white). The Pompons and many of the single varieties are equally suitable for massing, especially the self-coloured sorts, for most of them possess a fine sturdy habit. Those who contemplate utilising the Dahlia for this purpose should pay a visit to one of the nurseries where the Dahlia is a speciality. They could then make a selection for the purpose, for they could see the plants growing in quantity and so obtain the exact colours they need. R.

THE HEATH GARDEN.

THE IRISH HEATH IN AUTUMN.

SEPTEMBER is the month when the Irish Heath is seen in the height of perfection. Not that this is the only flowering season, for a continual display from May till October is usual, and this may be said of the bed illustrated on page 491, which at the time of writing (September 18) is flowering in the greatest profusion. For planting in large groups in the foreground of the shrubbery or on the



THE NEW WINTER-FLOWERING BEGONIA
FASCINATION.





ROSE MRS. CHARLES PEARSON. A NEW VARIETY OF INTENSE APRICOT-SALMON COLOUR. AWARDED A GOLD MEDAL AT THE NATIONAL ROSE SOCIETY'S AUTUMN SHOW.

flowered variety of the tuberous-rooted section, and the whole of them were given awards of merit by the floral committee. A fortnight later—that was, on November 21—the variety herewith illustrated, Fascination, was shown, and received a similar honour to the three already mentioned. The parents of this were *B. socotrana* and a copper-coloured tuberous-rooted variety. Another hybrid shown at the same time as Fascination was Rose Queen, whose large flowers are of a deep bright rose colour. It was obtained from *B. socotrana* and a white-flowered tuberous-rooted kind.

The main characteristics of these newer varieties of winter-flowering Begonias, compared with the older kinds, are a sturdier and more freely branching habit of growth, and larger and better-shaped flowers, which in general appearance suggest those of the tuberous-rooted forms. In foliage and in other particulars, but especially in the season of flowering, these varieties show markedly the influence of *Begonia socotrana*.

The cultural requirements of this class of Begonias are not at all exacting, provided a few important particulars are borne in mind. After the flowering season is over they should not be kept quite dry, as in the case of the tuberous-rooted varieties, for the *socotrana* hybrids do not form as solid a tuber as the others. Throughout the winter they should be placed in a structure where a temperature of 50° to 60° is maintained, and be kept fairly dry; that is to say, in a condition which the gardener would indicate by the expression, "on the dry side." With the return of spring the plants will soon begin to grow, and when the young shoots are long enough, they may be taken and inserted as cuttings. In a close propagating-case they will soon root, and when sufficiently

hardened off they may be potted singly or shifted into larger pots. Throughout the summer no fire-heat will be required, but a genial atmosphere must be maintained, and the structure in which the plants are growing be shaded from the rays of the sun. As the nights grow cold, of course, heat must be given in the pipes. The young plants, according to their vigour, will flower in pots from 4 inches to 5 inches in diameter, while a few of the strongest may be given even larger pots. If it is intended to grow the old plants on instead of propagating from them, they may, when the young shoots are from 1 inch to 2 inches in length, be shaken almost clear of the old soil and repotted. A suitable compost for these Begonias can be formed of two-thirds fibrous loam, pulled to pieces by the hand, and one-third leaf-mould, with a liberal sprinkling of silver sand. It may be noted

that the exceedingly popular *socotrana* hybrid, *Gloire de Lorraine*, was obtained by crossing the species just named and the fibrous-rooted *B. Dregel*.

THE FRUIT GARDEN.

THE BEST APPLES AND HOW TO GROW THEM.

(Continued from page 480.)

The Best Varieties.—The last question is that of varieties, and though this section must be headed *de gustibus*, I will try to cater for various tastes. First let us take dessert sorts, and I assume here that flavour is naturally the first consideration. The earliest Apple of first-class quality is no doubt

Irish Peach, perhaps a little shy in cropping, but so good as to merit a place in every collection. Following shortly after comes Williams' favourite (no relation of Williams of Pear fame, but a visitor from across the Atlantic). This Apple has not yet received the attention it deserves. Then, Lady Sudeley, a joy both for eye and palate; but, and this is an important "but," do not allow it to fully ripen on the tree. Gather and allow the Apples to come on in the fruit-room, or you will find them all ripe at one time. After this I recommend James Grieve, which at its best is unequalled in its season, and it will run close the best of any season. A good grower, cropper, and of handsome appearance, it will, for an all-round Apple, be very hard to beat. An excellent new-comer of about the same season is Hitchin Pippin, resembling Kerry Pippin in texture and flavour, but larger. I now come to the months of October and November—*embarras des richesses!* Mother, the American variety, is one that should not be omitted. Its fine flavour will appeal to all, and its soft flesh especially to those who are of riper years. [Does it crop well, everywhere?—Ed.] Margil, too, an old favourite containing the Ribston and Cox flavour, must be included. It makes a neat pyramid and crops regularly, though perhaps not so abundantly as could be desired, but it is distinctly an epicure's fruit. Allington Pippin needs no introduction, it having made its way into the front rank in the sixteen years of its commercial existence. If Cox's refuses to grow, try Allington.

The latter end of October sees the Reinette types of Apples come in. King of the Pippins, given a warm soil, is most desirable; a little tang of tannin flavour gives it a character of its own. Cox's Orange Pippin renders the month of November notable, and needs no adjectives; but perhaps a plea on its behalf may be entered. Do not gather too early. This applies also most especially to all the Apples of the Reinette class, such as the Russets, Blenheim Orange and Ribston. If gathered before quite "finished," they will acquire a rubber-like texture that will disconcert the most hardy of digestions. Ribston Pippin is another fruit we approach with some veneration, and,



AN EFFECTIVE GROUPING OF THE WHITE IRISH HEATH, A BEAUTIFUL DWARF SHRUB FOR AUTUMN EFFECT. (See page 490.)

rumour notwithstanding, it still grows and thrives. I have seen this year the finest fruit that has come my way. Warm soil and plenty of water, in my opinion, are the two principal needs of this delicious fruit.

December still sees Cox's in full sway, but the new William Crump is most promising, and should have a fair trial. Adam's Pearmain, for those who like a crisp Apple, is most delicious, and I confess my hand strays most often to its shelf at Christmas-time. And here also I would recommend an Apple which from its appearance would be consigned kitchenwards. Large, and of rather ugly Rambour shape, its dull green and brown skin gives little promise of its superb—yes, superb—flavour. Its name is Roundway Magnum Bonum. As the days grow longer, the various Russets come into season, and with the Crocus come Sturmer Pippin, Allen's Everlasting and Duke of Devonshire, all excellent if properly gathered and stored.

authority. Bramley's Seedling is also a good cooker when not too ripe, but more suited for standard growth than for dwarf trees.

January and February are the months of Lane's Prince Albert, an ideal garden Apple; and of the novelties, Edward VII. is very promising at this season. The absence of Wellington in the list is conspicuous, but the are as where it thrives now are so few and its successful years still fewer that I hesitate to recommend it; nevertheless, it is the best of all winter cookers in my estimation. Those having gardens on a warm, deep loam or brick earth will not want anything better; but it must be always sprayed and carefully pruned as precautions against the black scab, its special enemy, or the tree will go from bad to worse.

This list will, I am sure, shock nearly every one of your readers by its glaring omissions of their favourite sorts; but, after all, one can do no more than suggest. The reader himself must know by

Vacant Land.—As land is cleared of the remnants of crops it is excellent practice to put the digging or bastard-trenching—the latter, of course, for preference—in hand as soon as possible. It is the custom of some cultivators to leave all work of this nature until the end of October or November; but this is not wise, because the task is laborious and slow, and when one is forced to rush it along owing to unfavourable weather or other causes it is apt to be scamped, and the evil of this will be clearly apparent in the crops next season. Therefore bring it forward steadily as opportunity offers, never being satisfied with anything less than moving the soil to its utmost depth, as this is beneficial to the plants and economical of manure. Full trenching, in which process the positions of the surface and subsoils are reversed, is not recommended unless the cultivator is thoroughly familiar with the methods of soil working that have been adopted in previous seasons. It is desirable that the surface shall be left rough for the free admission of water, fresh air, and later on, let us hope, of frost.

Liming Ground.—Years ago far more lime was used on the land than is the custom at present, and in the majority of instances this is to be deplored. It is usual to rely more particularly on natural manures for the enrichment of soil in which vegetables are to be grown, and, when this is the case, at least once in five years, and sometimes even more frequently, a heavy application of lime ought to be given, because it improves the mechanical texture and at the same time sweetens and enhances the fertility of the soil. Ordinary lime is excellent, as also is ground lime; but perhaps ground limestone is the best of all where it is readily procurable. As a rule, it is wise to work in the lime after an interval of seven or eight days; but this need never be regarded as imperative, because the weather will invariably carry it down into the ground. After a heavy liming, such as is suggested for the purpose in view, it is excellent practice to rely almost exclusively on concentrated plant foods in the succeeding season, as they will keep the soil clean and, intelligently applied, will ensure splendid crops of all kinds. Where



METHOD OF LAYING A STONE PATHWAY. (See opposite page.)

Cooking Varieties now claim attention, and first of all comes Early Victoria, the best of the Codlin race. Fit to cook in August or the end of July, its even shape and regular cropping habits make it *facile princeps*. It cooks to a froth, and is of very white colour. To succeed, Ecklinville, where it thrives, is unequalled; but, alas! it is not what it used to be, and Grenadier is taking its place. The new Rev. W. Wilks will make a strong bid for the September and October season, and should certainly have fair trial. For November, Lord Derby is the staple market variety, but its cooking powers do not appeal to me, as it is rather brown, woody and tasteless. The newer Norfolk Beauty is making a strong bid for favour at this time, and has cropped well the last two seasons. Its parentage from Waltham Abbey has given it excellent cooking qualities. A word in favour of the old Beauty of Kent must be registered. Friends of mine say there is no cooking Apple so good, and I acknowledge their gastronomic

experience what he can and cannot grow, and in his hand must the final selection always rest.

Maidstone.

E. A. BUNYARD.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Lifting Beet.—With the advent of frosts it will be necessary to harvest the Beet, this being the most tender of the popular and valuable tap-rooted crops grown in gardens. It is not desirable to lift the roots until the leaves have been flattened down by frosts, but these must not be of sufficient severity to injure the root in the slightest degree. In storage each must proceed on the lines most convenient to himself; but heaps of alternate layers of roots and sand or fine, dry soil in a cellar or cool shed are admirable.

vegetables demand rotten manure in the trenches, such, for instance, as Celery and Leeks for exhibition, the case is slightly altered; but, apart from these exceptions, the artificials will respond to all demands.

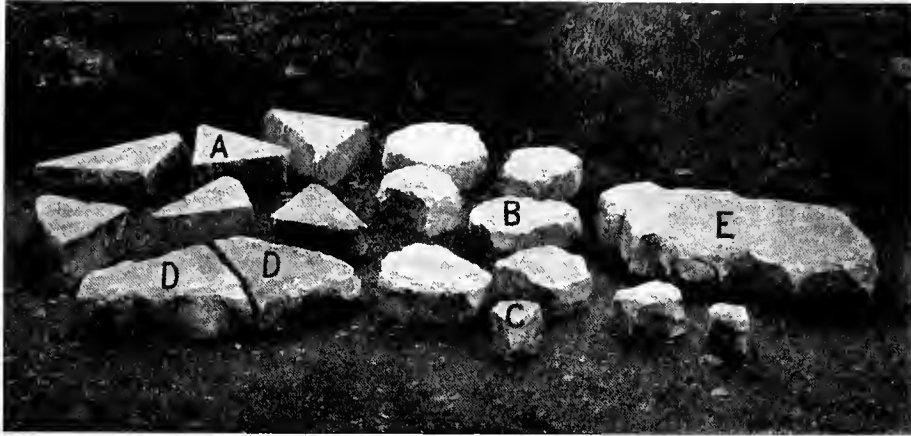
Mustard and Cress.—It is a necessity of most gardens that there shall be an absolutely unbroken supply of these piquant salad plants at command, and, fortunately, it is never difficult to ensure it. Seeds can be sown on damp flannel, blotting paper or other material in dishes if it is desired, or the customary system of sowing thickly on the surface of soil in boxes may be adhered to, according to fancy or convenience. The important point to keep in mind is to sow at frequent intervals, and invariably to allow the Cress from thirty-six hours to forty-eight hours longer to come into use than the Mustard, as the seeds do not germinate as quickly and the progress of the plants is a little slower. Although some growers cover the seeds with soil, the practice is deprecated. H. J.

GARDENING FOR BEGINNERS.

STONE PATHWAYS IN THE ROCK GARDEN.

Most of us who are rock garden enthusiasts appreciate the peculiar suitability of a rough

in this way, so as to make them more presentable, and from the photograph on this page a fair idea



STONE FOR A PATHWAY. A INDICATES UNPREPARED STONE, B C AND D PREPARED STONE, AND E A LARGE STONE MADE FROM THREE PIECES.

antique stone paving for the paths which wander in and near the alpine garden.

While it is desirable that the finished appearance of such a pathway should be as irregular and careless-looking as possible, it by no means follows that the path can be satisfactorily made by just throwing down a number of uneven-shaped pieces of stone and filling in the spaces with soil; indeed, for the path to be a permanent success, considerable care should be taken with it in the first instance. It is another of the instances—which are so plentiful in the rock garden—of the art that conceals itself.

The Best Material.—Doubtless the most pleasing results would be obtained by employing slabs of softly-tinted sand or lime stone, just as they come irregularly-shaped from the quarries—frequently of a delightfully roughened surface. In my own case, however, the obtaining of such was out of the question, and the best I could do was to get from the local builder a load or two of waste oddments from some York paving. These pieces were mostly triangular, more or less regularly worked and smooth, while few were more than 15 inches on the longest side.

Preparing the Stone.—The first thing I did was to lay out and sort up into sizes the stones I had, and from among the largest I selected those which, when laid side by side in pairs, made up a fair-sized slab. These pairs were then taken and the outside edges chipped by means of a cold chisel, so as to take off the regular outline and give them an aged and worn appearance, leaving untouched, of course, the two edges which were to be joined together. All the pieces of stone were treated

can be obtained of the immense difference which it produced in their appearance. Fig. A represents the untouched stone, while B shows it after the edges had been worked. D gives a good idea of one of the selected pairs ready for laying, while E shows a large stone made up of three pieces, though the actual cementing of the joints was not done (except in this case, for illustrative purposes) until after they were in position. C shows one of the corners from a larger and exactly triangular stone (which had been removed to improve the shape of the latter) chipped so as to become a very useful item in the pavement.

Preparing the Soil.—The next point was to prepare the ground which was to be paved. In my case this had been a path with a gravelled surface. I dug out the whole to the depth of about six inches, and, after well consolidating it, put in 2 inches of ash, so as to make sure no worms would come through and worry the plants. Upon this I put 2 inches of soil composed of loam, sand and broken brick, in about equal proportions, with a little leaf-soil added. This I carefully levelled from side to side of the path, so that, while it sloped a little from one end to the other, the surface of it was smooth and the incline regular. When this was all firmly rammed, the pieces of paving-stone were placed upon it and so arranged as to give at intervals of about one step, though not in alignment, one of the larger “made-up” stones, which would receive the bulk of the tread, making the whole look much more pleasing than if the stones were all of a uniform size. Each of the stones was carefully and solidly placed, pains being taken to see that the surface of them all were in the same plane. This was much simplified by the use of a straight-edged piece of wood, as shown in the illustration here given.

Making Large Stones.—When this was done to my satisfaction, I allowed it to stand for a week, by which time the rains had settled the whole well together. I then mixed up some neat cement into a fairly liquid consistency and poured it carefully into the joints of the “made-up” stones, which joints, by the way, I had kept open when laying them by placing one or two fragments of grit so that my trowel would readily go in between them and pack the cement tightly—not merely surfacing the crack with a little cement and so getting no real hold. The illustration below also shows the path when completed and the edge of the rockery rising therefrom. REGINALD A. MALBY.



THE PATHWAY COMPLETED AND PARTIALLY FURNISHED WITH LOW-GROWING ALPINES.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Treatment of Bedding Plants.—There are many subjects utilised in the arrangement of formal bedding that will be required again the next season; for instance, standard plants of Fuchsias, Lantanas and Swainsonas. In order to keep them through the winter, a frost-proof structure should be found for them. We stand them in a deep pit where slight heat can be given when necessary.

Border Carnations.—The rooted layers will by now be ready for severing from the parent plants, whether they are to be potted up or planted out in the positions where they are to flower next summer. On wet, cold soils such as we experience here it will be necessary to add plenty of opening material, such as crushed brick or mortar rubbish and road drift. It is also a capital plan to plant in narrow beds raised slightly above the natural level and with an alley or a path between. Well dig the ground, adding some decayed manure as well as the other material, and leave it upturned for a day or two to settle the soil and expose any insects to the birds. Plant in lines, allowing 6 inches to a foot between the plants and a foot between the rows. Place some sharp cinder-ashes round each plant.

Lawns.—These will require frequent brushings to disperse the worm-casts, afterwards rolling, which will add considerably to their appearance and promote the growth of the grass.

The Rock Garden.

Planting.—If it is necessary to plant, especially the more robust of the occupants of the rock garden during the autumn, this may be done with the same assurance of their well-doing as in the spring, especially when transferred from pots, as the majority of them are now to be had established in that way. For instance, with the formation of new rock gardens or additions, it need not be postponed any later, and the plants will become firmly established by spring.

Top-dressing.—This ought not to be delayed any longer if the work has been overlooked. In many cases the frequent rains have washed much of the rooting medium away, especially on shallow and otherwise exposed positions. Work the material between the growths, and settle down by a damping over with a fine-rosed can.

Plants Under Glass.

Chrysanthemums.—These, and especially where grown for large blooms, more so than the decorative varieties, must be housed when there is likely to be a few degrees of frost, otherwise the buds will suffer. Elevate the plants as near to the glass as possible, so that the growth will not become drawn. Before housing, the foliage may be syringed with an emulsion of paraffin, keeping it clear of the buds, which will check the rust from spreading and generally free the leaves of any insect pests. Admit abundance of air to the plants day and night, except when the weather is damp or foggy, when the side ventilators should not be used so freely. A slight heat in the pipes will considerably lessen the damping of the petals.

Housing Plants.—At this season there are many other subjects that will be much safer and better for greenhouse treatment, and, before housing, a thorough cleansing of the structure is advisable, both for appearance sake and the benefit of the plants. Many people clean the interior, but seldom the exterior. I would recommend that both be done, and especially the latter, frequently, in smoke-laden districts. The use of blinds and other shading material will not be needed now, except in a few instances. Thoroughly dry the blinds or other material before storing them, and wash off any mixtures, such as Summer Cloud or whitening, from the glass.

The Hardy Fruit Garden.

Nuts.—There has been a good crop of both Filbert and Cob Nuts this season, and many will want to know the best means of preserving them for use during the winter months. For a time, of course, they should be sent to the table with the husks attached, having first looked them through to see if there are any earwigs in hiding. A good plan for storing is to clean the Nuts from the husks and store by taking out a hole in the garden

sufficiently deep to admit of a drain-pipe. At the bottom place a piece of slate sufficiently large, stand the pipe on it and fill round the outside with soil to make quite firm. Fill up with Nuts, place another slate on the top and cover with soil. In this way they will keep for months.

Fruits Under Glass.

Figs.—The earliest-forced trees will now be fast maturing their foliage, and the trees should be gradually rested accordingly. Less water will be required at the roots, and syringing of the foliage should be carried out in bright weather, while any leaves remain, to check the increase of red spider. Gather up the leaves that fall and keep the borders clean. Mealy bug is a troublesome pest, and before the days get too short the insects should be looked for and killed by the use of a little methylated spirit and a camel's-hair brush. Cyaniding is the best means of extermination, but requires doing with great care owing to its poisonous properties.

The Kitchen Garden.

Turnips.—These have been of excellent quality this season, and the roots may, if wanted, be taken up before they get too old, and stored in sand or soil in a cool shed in the same way as Carrots. Keep the hoe at work among the growing plants, and single out as they become large enough.

Radishes.—Make a small sowing or two at intervals in a cold frame wherever there is room between other plants.

Carrots.—The main crop of Carrots should by this date have completed their growth and be ready for lifting and storing away for use during the winter. Fine soil or sand should be sprinkled in among them, storing only the best-shaped roots.

General Work.—The garden should be made as tidy as possible at this season, and as fast as the crops have finished yielding, such as Peas, Beans, Marrows, &c., the plants should be pulled up and burnt, or the haulm removed to the rubbish-heap to be used later for placing in the bottom of the trenches. Continue to plant out Cabbages on vacant ground, and see that the plants are protected from slugs by placing some cinder-ashes round each. Globe Artichokes that have been touched by frost should be cut down or otherwise made tidy. Hoe frequently and keep down weed growth. Keep the paths clean and rolled during showery weather.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Propagating Violas.—This may be proceeded with at any time during the next three or four weeks, choosing slips from the centre of the plants, the old hollow flowering shoots being unsuitable. The cuttings are usually inserted in a prepared bed in a cold frame, but they do well enough in a sheltered position in the open.

Other Plants.—Gazania splendens, Antirrhinum from selected plants, Pentstemons, Lavender, Veronica Andersonii variegata, Anthemis tinctoria, Golden Privet and Calceolarias are others which should be propagated at the same time. Cutting-boxes are best where only a few dozen plants are wanted, but for large quantities prepared beds in frames are better. It is a mistake to let any of the cuttings get dry and wilted, therefore take care to keep them wet till they are inserted, and afterwards it will be easy to keep them from flagging.

Walks.—Where these have to be hoed to destroy weeds, this may be done for the last time, choosing a drying day for the operation and raking the gravel as the work proceeds. Grass usually has to be picked up on account of its taking root so easily. Probably, if edged at the same time, the sides of the walks will remain quite neat till next spring. Let nothing remain that may possibly be an eyesore, but clean everything as perfectly as possible.

Mowing.—Besides closely mowing the lawns for the last time this season, all the odd places that necessarily have to be cut with scythes and shears should also be closely trimmed. Usually grass does not grow much after this time, and if it becomes a little rough, frost shortens it in due time without killing any of it.

Roses.—Any wild shoots should have a final tying to keep them from being damaged by wind, and they also look better if kept in position and not swaying in every direction. A certain amount of pruning in the way of removal of worn-out growths from bush plants may be performed with advantage. Trim Sweet Briar hedges for the last time this year, and see that strong shoots of Banksian Roses are secured for the winter.

The Plant-Houses.

Carnations.—The earlier Perpetuals will now be well in flower, and should be regularly cut while still young, else they do not last long and will prove a drag on the plants. If any aphid has been observed, vaporise a few times at short intervals. Soot-water and weak solutions of cow-manure are valuable helps to keep the foliage a deep colour, and also to brighten the flowers. These are to be preferred to sulphate of ammonia or nitrate of soda, which in the end softens the plants and hinders the production of bloom. Give all the fresh air possible.

Malmisons.—Any young plants still in frames should be transferred to a heated structure forthwith, and provision should be made to repot those at once that would do better with a shift before spring. Some cultivators, on the other hand, prefer to winter young plants in small pots, and no doubt there is less chance of ruining them by overwatering.

Arum Lilies.—Where the stock of these is planted out, the plants should now be lifted and placed in pots just large enough to contain the lightened balls, packing very rich material in to fill empty spaces. Let the plants stand in the open for a few weeks in a spot shaded from the sun. They do much better thus than if placed under glass immediately subsequent to being potted.

Schizanthus.—To succeed Cinerarias a sufficient number of plants should be placed in 4-inch pots, to be repotted as required later. The treatment as to temperature, &c., accorded to Carnations suits them perfectly, and though progress seems slow during winter, the plants grow very fast afterwards without being drawn and weak.

The Fruit Garden.

Late Peaches.—These will mature very slowly after this, and may require a slight heat in the piping during cold weather to hasten ripening. All superfluous growth should be rigorously suppressed, and unless the horders have been allowed to become dry, no more water need be applied at the root and syringing should cease. It is unusual for animated parasites to attack Peach trees after this date, but slight fumigations will be much better for the crop than syringing, should insects appear.

Maturing Wood.—It sometimes happens in a season such as the present that the young wood fails to ripen, when a fortnight's hard firing may be adopted, with a good deal of the old growths first excised. But much may be done by judicious winter pruning to counteract the evil of immature or partly immature growths.

Lifting Young Trees.—Any time during the next six weeks young fruit trees may be lifted with advantage, the over-long roots shortened and immediately replanted. The benefit of this operation is apparent for several years, but the intervals of relifting as above should not be too long extended. It is at once easier to operate in this way and better for the trees than to root-prune without lifting.

The Vegetable Garden.

Cultivating.—As opportunity permits, the cultivating of the garden by means of digging and trenching should be proceeded with. Many delay till it is possible to wheel on manure, but this is of secondary importance, soil broken up before winter sets in being much better than that cultivated later. In trenching do not be afraid to turn the top spit into the bottom nor bring the under spit to the top. The vicissitudes of the weather, wind, frost and rain, with manure, will put it all right before cropping-time.

Rhubarb.—Make preparation for the forcing of a quantity of this important winter vegetable. Select the strongest plants, which it is usual to let lie on the surface to check them sufficiently before placing in a warm structure or Mushroom-house. If lifted with soil attached, keeping the balls constantly moist by syringing, this is sufficient to keep them producing.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

SWEET PEA NOTES.

Autumn Sowing.—I am not sure whether it would not be just as well to alter this somewhat stereotyped headline to read "Autumn Buying." If the reports to hand from North, South, East and West are all quite true, there will be no Sweet Pea seeds left at the beginning of January, and it is, therefore, imperative that those who wish to have a few rows or clumps in their gardens during the summer of 1913 shall buy the seeds in the autumn of this year, even if they do not sow them then. I have some lingering impression in my mind that those who want seeds in the spring will be able to purchase them; but that the crops are short the world over none can possibly doubt, and it will assuredly be wise to order early in case of accidents. There is one advantage that will accrue upon the shortage of supply. In recent years seedsmen have given so many seeds in a packet that they have often been sown *à la* Mustard and Cress, and the growers have promptly condemned the seeds, the seed merchants and the plants themselves because perfect exhibition blooms were not produced. With a smaller number of seeds to sow, much more care will be exercised in carrying out every detail, and the ultimate result will be that Sweet Peas will be finer than they have ever been before, provided, of course, that the season is reasonably favourable to their growth. In any case, send for lists and despatch the order instantly.

Outdoor Sowing.—One must feel some regret that mice and slugs have a partiality either for the seeds or the seedlings of Sweet Peas, and thousands of plants are annually ruined by their depredations. Measures are taken to prevent serious injury every year, but the furred and feathered visitors are not easily denied, and it is rare indeed that they do not secure a fair share of the good things in the garden. However, the ardent grower will accept the risk in the hope that the plants which escape will produce superb blossoms that will win a few prizes and trophies at various shows. In a soil that is on the strong side, the present is an excellent time to sow; in good loams about the third week of October will answer best; while in warm sands the middle of November may usually be accepted as ideal.

It is obvious that the precise date of sowing will in each instance be governed by the weather. It is much wiser to wait a week or two than to sow in land when the conditions are not suitable. In any event, the trenches should be flat-bottomed and firm over soil which has been deeply and thoroughly worked and generously but judiciously manured. The depth of covering will depend largely on the consistency of the soil, and, in a smaller degree, upon the variety in hand. In a sandy soil seeds may be set deeper than in a clay soil, and the light-coloured and spotted seeds ought not to be more than pressed into the surface.

Indoor Sowing.—The majority of people who aspire to the production of exhibition Sweet Peas and pin their faith on autumn sowing adopt the system of putting the seeds in pots in cold frames, and there can be little, if any, doubt that the practice is wise. Six-inch pots, filled to within about one inch of the rim, with a compost of three parts loam, one part refuse manure and an eighth or a tenth part of sand, are most favourable, though 3-inch pots may be utilised under compulsion. In the larger size five seeds will be set equidistantly 1 inch from the sides, while in the small pot one seed will find accommodation in the middle.

The secret of success in autumn sowing in pots lies in growing from the start in the hardiest possible manner. Even the slightest suspicion of coddling will be followed by worry and trouble, if not by disaster. Broadly speaking, the tenth day of next month is the best time to sow in pots, but in this matter there will be slight variations, governed by the experience of each cultivator in his individual surroundings and circumstances. Although it cannot be written down as necessary, the wisdom of sowing the light-coloured and spotted seeds in a surfacing of sand over light, porous soil cannot be questioned. HORACE J. WRIGHT.

**ANSWERS
TO CORRESPONDENTS.**

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

AURICULAS (*Zedox*).—One cannot recommend any particular varieties for cross-fertilisation. You must use those possessing some special feature of colour, size, form, or substance which you especially desire to improve. We do not know any book devoted exclusively to the Auricula. There is no objection whatever to the use of burnt ballast for the purpose named, and we wish you every success.

SWEET PEAS (*W. H. Cox*).—The leaves of the Sweet Peas are really grand, but some of the flower-stems are extremely weak. The plants have either received a check or the roots are working in some unsatisfactory medium. It is more than probable that if you had kept the laterals well pinched out, watered and mulched the plants to keep them in steady progress, you would have experienced no further serious trouble.

DELPHINIUM DISEASED (*E. B., Handley*).—The leaves are affected by the fungus known as Septoria delphinella, and we can only suggest that you at once cut down the plants to the ground and burn every vestige of leaf and stem. In this way, unless the fungus has already matured, it may be possible to keep it at bay. Should there be in the new autumn growth further evidences of the disease, cut off the affected parts and burn them at once. Hitherto we have been spared the infliction of this disease, though in the past year or two it has appeared in more than one collection of these plants. As a precautionary measure, another year you might early spray the plants with permanganate of potash, or a weak solution (1oz. to the gallon of water) of sulphide of potassium.

ROSE-BEDS AND TULIPS OR DAFFODILS (*E. M. M.*).—Considering (1) the exposed, windy situation, (2) the heavy soil, and (3) that it is wished to leave the bulbs in the bed for two or three years, we do not advise Tulips, but Daffodils. If, however, it is decided to try Tulips for one year or so, we strongly advise their being lifted as soon as the foliage has become yellow. In a lighter soil they might be left undisturbed. For April blooming they must be early-flowering varieties, and we would advise one colour only in each bed. Vermilion Brilliant (red) and Erubilde (white with yellow flame) would be a good combination; Yellow Prince (dwarfish yellow) and Prince of Austria (terra-cotta, tall) would be another; while as a third choice, a decided novelty, we would suggest Hector (orange red, edged pale yellow) and Primrose Queen (primrose yellow). If four varieties of Tulips are essential, Fred Moore (orange), Prince de Ligoy (rich yellow), Prince of Austria (terra-cotta) and President Lincoln (rosy purple) are the ones suggested, or the last two of the above pair combinations might be used together. Should Daffodils be decided upon, the choice is very wide. One variety to one bed should be the rule; everything looks its best in a mass. Emperor and Empress in alternate beds is one suggestion; Autoerat, Mrs. Langtry, Beauty and Constellation another. These are all cupped sorts. Aspasia, Elvira, Irene and Klondyke would make four good Poetaz varieties. If bold trumpets are desired, Mme. Plomp, Glory of Leiden, Cornelia and Fairy would be a good quartet.

TO PROPAGATE PHLOXES (*R. P.*).—Spring or autumn is the best time to propagate these. Select the young shoots at the base of the plant. These should be inserted in 6-inch pots (filled with sturdy soil) an inch apart, and the pots placed in a warm pit or frame, shaded from bright sunshine. As soon as the cuttings are rooted, let them be potted into 3-inch pots, wintered in a cold frame, and planted out at the end of March. They may also be propagated from seed.

TREATMENT OF ANNUALS AND OTHER PLANTS (*C. S. K.*).—We should not recommend pinching out the tops of Stocks or Wallflowers generally, since there are so many dwarf bushy and free-flowering types which branch naturally and quite low down, and if dwarfness and freedom of flowering are the main objects in view, you should grow these for preference. Legginess and spindly growth in such plants, however, are frequently created by inferior culture, by overcrowding of the seedlings, by long standing in the seed-bed and in other ways, and if your method of treatment has embraced any of these, you had better correct them. An over-shaded garden where there is much tree-life also brings this legginess into being. Seeds require to be thinly sown, to be early transplanted, and given elbow-room if all their good attributes are to be brought out. Verbenas are most usually stopped several times when used as bedding plants, pegged down, the object being to cover space, and this being accomplished, the plants are allowed to go. It is by no means essential, however, and we have seen seedling examples, when expertly grown, produce a 2-feet mat of growth in a season without a point being removed. The Nemesias require a rich, warm and moderately light soil, and unless attacked at the base of the stem by wireworm or millipede, should have made a favourable growth in a season like the present. In a cold or ill-drained soil these plants are not usually a success.

THE GREENHOUSE.

EXHIBITING AN ASPIDISTRA (*Chitraloe*).—There is no objection to the sticks used for supporting the leaves of Aspidistras; but it would be far better to remove them, as the leaf-stalks should be quite strong enough to do away with the need for sticks. In keen competition the sticks would be regarded as a demerit.

STATICE PROFUSA (*Mrs. Annesley*).—This species requires the protection of a greenhouse, though, if kept moderately dry at the root during the winter season, it would be quite safe in a temperature of 40° or thereabouts. You would be able to obtain plants through Messrs. James Veitch and Sons, Limited, Chelsea, S.W.

COBÆA SCANDENS (*A. W. J.*).—There is no sign of living insects on the leaves of *Cobæa scandens variegata* that you have sent. They must, however, have been very badly attacked by aphides or green fly, as one of the leaves sent on the under side is absolutely clothed with the excrement of these pests. This has, in its turn, afforded a ground for a fungus attack, which has destroyed the weaker portions of the leaves. If all the insects are dead, you can do nothing in the matter, as the leaves are of too delicate a nature to wash them with soft soap and water, which would be effective in the case of firm-textured leaves. Our opinion, however, is that the *Cobæa* being of good free growth, these leaves that are unable to fulfil their natural functions will soon drop off and new shoots be pushed out provided (and this is a most essential matter) that aphides are not again allowed to effect a lodgment on the plants. For the destruction of insect pests, vapourising with the XL All Vaporiser is much preferable to fumigation in any form.

FERNS (*W. E. P.*).—The name of the specimen sent is *Platyceerium Aleicoorne*, known popularly as the Elkhorn Fern. In a state of Nature it grows principally on trees in the forks of the branches, or on the stems, to which it attaches itself by means of its roots. As will be understood, this Fern is not seen at its best when grown in pots in the ordinary way, but succeeds when fastened to a piece of virgin cork, or the portion of a stem of a Tree Fern. It must, of course, have some rooting medium, consisting mainly of fibrous peat and live sphagnum moss, which may be kept in position by means of copper wire. It is, of course, necessary that the plant be regularly watered, and if hung up, which is the best position for it, a good way to supply its wants in this respect, provided it is not too large, is, when dry, to take it down and soak it in a pail of water. This Fern is a native of Australia, and during the winter months needs a temperature of 50° to 60°. In the summer no fire-heat will be needed. Of course, like Ferns in general, it must be shaded from the direct rays of the sun.

AZALEAS (*E. B.*).—Although it is now rather late, we should advise you to repot your Azaleas as soon as possible, as the new fibrous roots will soon take possession of the fresh soil. As they are now in 5-inch pots it will be as well to put them into 6-inch or 6½-inch ones. A suitable compost consists of fibrous peat with a little silver sand. In repotting, the crocks should be taken from the bottom of the ball of earth, and the outside of the entire ball be loosened with a pointed stick. The roots, however, must not be disturbed more than is necessary. When repotting it is very essential that the old ball of earth is in a fairly moist condition, while it is also of equal importance to see that the new soil is made very firm and even all round. For this a piece of wood, such as a portion of a lath, will be very useful. After being repotted it is very important to see that they are not allowed to get too dry at the roots, while an occasional syringing, especially on the evenings of hot days, will be of great service. Another point to bear in mind when repotting is that the plant must not be buried deeper in the soil than it was before.

ROSE GARDEN.

VARIOUS QUERIES (F. H. Hallfax).—The Rose we believe to be Reine André, one of the wehrhauana tribe. W. A. Richardson would be an excellent variety to grow under glass; but instead of Reine Marie Henriette we would recommend Climbing Liberty. Some other good climbers for cold greenhouse culture are Climbing Lady Ashdown, Gustave Regis, Bouquet d'Or, Hugh Jackson and Frau Karl Druschki.

ROSE BUDS INJURED (Fourwinds).—The usual cause of hard and malformed buds, such as those sent, is a check during development, such as might be imposed by cold nights, drying winds, or lack of rain. Some varieties appear to be more subject to it than others. The brownning of the foliage of the Plum sent is not due to any insect or fungus, but to something wrong with the water supply. If this is seen to, unless the roots have perished, there will probably be no repetition of the trouble next year.

ROSES FOR COOL GREENHOUSE (A.).—Some good climbing Roses for a cool greenhouse would be Bouquet d'Or, W. A. Richardson, Climbing Mr. Grant, Climbing Lady Ashdown and Grass an Teplitz. These could be grown on the roof, wall, or upright supports. The following bush or dwarf Roses would also provide plenty of bloom: Caroline Testout, Mme. Abel Chatenay, Mme. Ravary, Mrs. Aaron Ward, Antoine Rivoire, Anna Olivier, Mme. Hoste, Frau Karl Druschki, La France, Captain Christy, Captain Hayward, Ulrich Brunner, Richmond, Lady Pirrie and Augustine Guichonseau.

ROSE FOLIAGE BLIGHTED (J. M.).—We fear you can do nothing now for the black spot save gathering up the fallen leaves and burning them. Another year try spraying early with Cupram or Bordeaux mixture, and continue this at intervals throughout the season. If the Roses have not been too long in the present position, it would be well to transplant them in October. Just dig them up and heel them in in any out-of-the-way place, then have the soil trenched and the top soil for a few inches in depth buried in the bottom of the trench; then replant the Roses. They will do all the better for such a transplanting. Of course, you would leave out any sickly plants, for it does not pay to nurse up weak things.

ROSES SUDDENLY FAILING (Mrs. M.).—Probably the plants have suffered from drought, or maybe there has been an overdose of chemical manure used in the soil, or probably they have recently received some liquid manure that has proved too strong for the young roots. While either of these things may be the cause of failure, we cannot but think the plants have some disease which is peculiar to foreign-grown plants, for we notice by the labels that they are not English grown. We are confident that much of the black spot and other diseases frequently found to-day in our gardens are introduced upon these foreign plants, and we would advise you to procure your supplies from home growers who have a reputation to maintain. All you can do now is to make sure it is not drought the plants are suffering from, and if you think it is, give a good soaking of plain water.

INJURY TO ROSES (R. T.).—From the condition of the buds of your Dorothy Perkins Rose which were sent for examination, we should imagine that they are attacked by mildew. This may be easily ascertained, for in the event of the disease being present, the leaves, young wood and flowers would be covered, more or less thickly, or perhaps in patches, with a greyish powdery substance. If this is found, you had better spray the plant with Bordeaux mixture, taking care to damp both sides of the leaves. The mixture may be prepared as follows: Dissolve 1 lb. of copper sulphate in two quarts of warm water in a wooden vessel; then dissolve 1 lb. of quicklime in cold water to make a thick cream. When cold, mix the two together and make up to ten gallons with clear water. The mixture may be used now, but further applications must be made next spring when the leaf-buds are breaking into growth. Another effective fungicide may be made by dissolving 1 lb. of potassium sulphide in fifty gallons of water. This mixture should be used as recommended in the other case. Rhubarb clumps are weakened by being forced in successive years. We advise you to force the clumps in alternate years only. The leaf sent for determination appears to be a large-leaved form of *Ficus repens*.

FRUIT GARDEN.

GOOSEBERRIES SHRIVELLING (Miss E.).—The shrivelling of the Gooseberries is due to something interfering with the flow of water up the plant, not to any disease of the berries themselves; but what it is is not evident from the specimens sent. One must see the stems and foliage as well.

APPLE AND PEAR LEAVES FOR INSPECTION (J. H.).—The Apples and Pears are attacked by the Pear leaf-miner moth. It is difficult to deal with, the only practical method being to watch during May and June for the moths, which are very small and greyish in colour, and spray the trees then with lead arsenate. The moth lays her eggs on the leaves.

MADRESFIELD COURT GRAPES SPLITTING (M. G.).—The cause of splitting is too damp and close an atmosphere at this stage in the growth of Grapes. Splitting is a common complaint with the grand variety of Black Muscat. The danger time of splitting is when the Grapes are approaching full size and about to start colouring until the end of the time of colouring. The way to prevent splitting is to admit air freely at this time, day and night, through the front and top ventilators, and to prevent the temperature becoming too low, especially at night. Have a little fire-heat during the whole of this time. A gentle heat in the pipes dries the air and keeps it in constant circulation.

INJURY TO LOGANBERRIES (T. E. W.).—The maggots in the Loganberries are those of the beetle *Byturus tomentosus*. This pest also attacks Raspberries and Blackberries, and passes from the wild to cultivated plants. It lays its eggs in the flowers (on the pollen of which it feeds), and may readily be seen in them. Spraying with lead arsenate when the plants are in flower appears the best way of dealing with it.

INJURY TO PEARS (F. W.).—The Pears are attacked by the fungus *Fusicladium pyrinum*. Nothing can be done now to cure them; but next winter cut out all diseased wood, spray the trees with 1 lb. of copper sulphate to twenty-five gallons of water, and in the spring with Bordeaux mixture before the buds burst and again as soon as the petals fall, also about three weeks or a month afterwards. Burn affected fruits.

MISCELLANEOUS.

PARASITE (J. C. H.).—The worm sent is a species of *Gorhous*, which lives as a parasite for the greater part of its life in the intestines of an insect, such as the ground beetle which you enclose with it. The latter is a carnivorous insect, and therefore likely to be a useful one in the garden. Its larval form is also carnivorous. The Curran's which are infested with aphid should be sprayed with Quassia and soft soap. Some good may be done now, but more would have been done if the spraying had been carried out when the foliage was first attacked.

SOIL FOR INSPECTION (Northern Reader).—The soil is very poor stuff indeed, and we should advise you to have some new soil if you desire to grow good Roses. If you use any of this, you must add fully one-half of good turfy loam, for it is largely deficient in humus. You should also add one part out of three of good cow-manure. We advise taking out this soil 3 feet in depth, then add two parts of new soil from a meadow, or top soil such as you sometimes obtain where building operations are going on, one part of the soil you take out, and one part of cow-manure; then mix together and return to the beds.

DRESSING FOR LAWN (J. H.).—You will do quite right by giving your lawn a dressing of soil as you suggest, and then sowing seed where the grass is thin. The work ought to be taken in hand about the end of September, for at that time the ground is warm and the seed will soon germinate, thus giving the young grass plants time to get strong before winter sets in. Next year you may put sea sand over the lawn, taking care to rake it in well and roll it well. This will tend to encourage the finer grasses, and will be against the development of the coarser kinds. Subsequent dressings of sea sand may be necessary, while it would be good to thoroughly mix a fair quantity of bone-meal with it before applying it.

MOSS BALLS FOR EXAMINATION (M. A. B.).—The moss sent for examination was *Leucobryum glaucum*, a species which is frequently found in woods which are rather bare of vegetation. It possesses the peculiarity of growing in dense, ball-like tufts, which may be from 1 inch or 2 inches to 6 inches or more in diameter. These balls sometimes become detached from the surface upon which growth has originated, and the plants continue to live for a considerable period in this condition. The species is found in many parts of the country, notably in the Beech woods of Surrey, Sussex, Hertfordshire, &c. As a rule, it occurs in the damper parts of the woods, and might easily be mistaken for a compact form of sphagnum.

TO DESTROY ANTS (C. L. G.).—The recipes for the destruction of ants are numerous and varied; but there is not one so successful as flooding their nests with boiling water. It often happens that their nests are fixed in awkward places, such as among the roots of trees, where this remedy could not be applied. A good plan is to place a small ridge of fresh-slaked lime on the border round the trees, and not too far from them. This will prove an effective barrier to their getting to the trees. Boiled bones, partially cleared of meat, and sponges dipped in treacle form excellent traps for them. They should be placed under the tree or among the branches, and will soon be covered by the insects. They are then easily destroyed by steeping in boiling water. Either the bones or sponges may again be returned to their places under the trees to secure another lot.

NAME OF PLANT.—*M. M.*—The Orpine, *Sedum Telephium*, a native of Britain.

NAMES OF POTATOES.—*J. W. Hatchett.*—It is very difficult to name many sorts of Potatoes, but yours are distinct. They are: 1, Herd Laddie; 2, Edgemoor Purple; 3, Adirondack.

NAMES OF FRUIT.—*G. W. L. B.*—The Apple that you say is a seedling is King Harry, a second-rate dessert variety.—*Miss Johns.*—Both 1 and 2 are Wellington.—*A. I. Sampson.*—1, Marie Guise; 2, Louise Bonne de Jersey; 3, Thompson's; 4, Josephine de Malines; 5, Marie Louise d'Uccle; 6, Wellington; 7, Washington; 8, Fearn's Pippin; 9, Lord Derby; 10, Lord Suffield.—*E. A. Turner.*—1 and 5, Bramley's Seedling; 2, Round Winter Nonsuch; 3, Sandringham; 4, Striped Beaufin; 6, Lane's Prince Albert; 7, Gasconne's Scarlet.—*H. Salter.*—1, Warner's King; 2, Eckinville Seedling; 3, Dutch Mirabelle; 4, King of the Pippins; 5, Hall Door; 6, Wellington; 7, Catillac; 8, Beurre d'Arenberg (query, arrived rotten); 9, Darondeau.—*B. S.*—1, Marie Louise d'Uccle; 2, Beurre de Die; 3, Doyenné Rousseau; 4, Duchesse d'Angoulême; 5, Glou Morceau; 6, Wellington.—*A. G. S.*—1, Dutch Mirabelle; 2, King of the Pippins; 3, Lemon Pippin; 4, Warner's King; 5, Wellington.—*T. H. O. Pease.*—1, Cox's Pomona; 2 and 3, Lord Suffield; 4, Lady Hamilton.

SOCIETIES.

NATIONAL DAHLIA SOCIETY.

The annual exhibition of the National Dahlia Society was held at the Crystal Palace, Sydenham, S.E., on September 17 and 18. One of the chief features of this exhibition was the increased interest displayed in the Peony-flowered and the newer Collarette Dahlias. At the same time, the Cactus-flowered section were admirably represented, and the time-honoured show Dahlia, having lost none of its popularity as a garden flower, was also shown well. Some very attractive exhibits of singles and Pompons were to be seen, and much interest was shown in the novelty Crawley Star, the forerunner of a new race henceforth to be known as Cosmea-flowered. A description of this new break appeared in our issue last week, page 480. Of the Collarette Dahlias shown, none attracted more attention than Maurice Rivoire, one of the earliest varieties of this new departure. Other good varieties of the same section that were freely shown were Bismarck, Meteor and Henri Farman. Four of the best Peony-flowered varieties, all of which were well shown, were The Geisha, South Pole, Hampton Court and Liberty.

NURSERYMEN'S CLASSES.

The nurserymen's classes were in most cases well contested, and blooms of first-rate quality were noted, particularly among the Cactus-flowered section.

Messrs. Stredwick and Son, Silverhill Park, St. Leonards, gained the silver challenge cup for Cactus Dahlias with blooms of the finest quality. The same exhibitors carried off a gold medal for the best seedling Cactus Dahlia, Gigantea, a bronze red variety of remarkable size.

Mr. M. V. Seale, Sevenoaks, showed capital blooms of Cactus Dahlias, and was well to the fore among competitors.

Messrs. Cheal and Sons, Crawley, were particularly successful with fancy singles, and their novelty Crawley Star, to which we have already referred, came in for a deal of attention.

Messrs. Keynes, Williams and Co., Salisbury, gained the premier award in the large class for forty-eight Cactus-flowered blooms, distinct. It was an admirable collection and in every way a credit to the exhibitors.

Mr. S. Mortimer, Farnham, was once again to the fore with show Dahlias, and was a capital first for forty-eight blooms, distinct, and again for eighteen blooms, distinct.

Messrs. J. Burrell and Co., Cambridge, were prominent with Pompon Cactus blooms; and Mr. Charles Tamer, Slough, was well to the fore in the classes for Collarette and Peony-flowered Dahlias.

Messrs. William Treseder, Limited, Cardiff, were easily first for a basket of Dahlia blooms, showing an immense basket of crimson and yellow Cactus-flowered varieties with ornamental foliage. The same exhibitors were first for twenty-four Cactus-flowered Dahlias, distinct varieties.

AMATEURS' CLASSES.

Competition in these classes was generally very good and the quality, particularly among the Cactus blooms, was quite as good as could be expected in a season not favourable to Dahlia culture.

Mr. H. Peerman, Glenocross, Nantwich, gained the premier award and silver medal for twenty-four blooms, distinct, with a fine and uniform set of Cactus-flowered varieties. Among the best blooms were Glory of Wilts, Ivernia, Johannesburg and Olympia.

Mr. S. H. Cooper, The Hamlet, Chippenham, Wilts, was the winner of a silver challenge cup for twenty-four fancy blooms with a capital selection, among which we observed Pleasant, J. T. Saltmarsh and T. Jones.

Mr. F. W. Fellowes, The Lane House, King's Walden, Hitchin, won the society's silver challenge cup for nine Cactus-flowered varieties, three blooms of each. It was a fine and attractive stand. His blooms of Ivernia, Mrs. Stredwick and Glory of Wilts were perhaps the best of a very fine lot.

Mr. Luckin Apsley, Thakeham, Pulborough, Sussex, was a very successful exhibitor, his first-prize blooms of fancy or intermixed Dahlias being greatly admired.

Mr. H. Brown, Dahlia Dene, Sutton, won the silver challenge bowl for Pompon Dahlias in keen competition. Among the best blooms were Violet, Nerissa and Jessica.

The silver challenge cup for garden Cactus Dahlias was won by the Rev. Arthur Bridge, Worth Rectory, Three Bridges, Sussex, for effective and well-arranged vases of blooms.

TRADE GROUPS.

Large Gold Medals.—Messrs. Cammell and Sons, Swanley, Kent, for a representative collection of Dahlias; and Messrs. Spooner and Sons, Hounslow, for a magnificent collection of Apples, comprising 150 varieties, also Pears, Bullaces and Crabs.

Gold Medals.—Mr. J. B. Riding, Chingford, Essex, for a group of Dahlias, including Collarette, Peony-flowered and Anemone-flowered sections; and Mr. J. F. West, Tower Hill, Brentwood, for Dahlias of all classes, among which the Pompons were a strong feature.

Large Silver-gilt Medals.—Messrs. Ware, Limited, Feltham, Middlesex, for Dahlias, Begonias and herbaceous plants; and Messrs. Carter and Co., Raynes Park, London, for Dahlias tastefully arranged with Ferns in a circular group.

Silver-gilt Medals.—Messrs. Hobbies, Limited, Norfolk Nurseries, Dereham, for an extensive collection of Dahlias, in which the Collarettes were well represented; and Mr. J. Emberson Walthamstow for a general collection of Dahlias.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

A Simple Autumn Border.—A simple yet effective border that we noticed in a small garden a few days ago is worth recording. This was planted with a double row of the yellow-flowered *Chrysanthemum Horace Martin* at the back, with a single row of *Goacher's Crimson* in the foreground, the whole being finished with a foot-wide edging of *Alyssum maritimum*. Although certain shades of yellow and crimson do not harmonise well, the effect produced in this instance was most pleasing.

Begonia Froebelii incomparabilis.—Those who remember or have grown the original type of this *Begonia* will find the variety named a decided improvement, as much in the richness and intensity of the colour of the flowers as in their size. A characteristic of the section is the rather woolly, spreading and nearly prostrate leaf-tuft, above which the flower-stems rise to 9 inches or so high. The flowers are of an intense crimson, the buds, like the footstalks, being covered with a soft white tomentum.

The Azalea Garden in Autumn.—Hardy Azaleas are so very pleasing in late spring and early summer when smothered in blossoms varying from palest pink to deep orange that we are apt to overlook the value of these shrubs for their autumnal tints. At the present time the foliage of the Ghent Azalea or Swamp Honeysuckle is in varying hues of bronze, purple and crimson. The Californian species, *A. (Rhododendron) occidentale*, is one of the best in autumn, and others that may be noted for their autumn tints are flavum, flavum tricolor and sinense.

Rudbeckia laciniata.—This showy Cone-flower has been very good this season, the wet weather apparently suiting it better than that of last summer. This is not surprising, as it is a native of moist thickets in the Northern United States. Growing to 6 feet, 7 feet, or even 8 feet in height, it is showy with its deep yellow, green-centred flowers, which are useful for cutting. For the back of the border or for the wild garden it is an excellent subject, while the long continuance of bloom, which is one of its characteristics, renders it valuable for the small garden as well as for the large one.

Perennial Asters as Woodland Flowers.—The value of perennial Asters or Michaelmas Daisies for colour effect in the woodland should be far more widely known than it is. At Kew the woodland garden is made to look very attractive at this season by the large informal groups of perennial Asters scattered about in various parts of the grounds and under the shade of trees. The Italian Starwort (*A. Amellus bessarabicus*) is admirably suited for woodland planting. Robert Parker is another variety that is amenable to this mode of culture, and others that are robust and free-flowering

may be relied upon for pleasing touches of colour in the woodland at this season.

A Rock Garden Near the Strand.—As evidence of the intense interest that is now being taken in rock gardening, it is worth recording that an alpine garden is about to be built in the heart of London and only a few yards from the busy Strand. At the north end of Waterloo Bridge, and opposite Somerset House, an open space has for some years been occupied by Bay and other trees in tubs, these belonging to Mr. Buder, a florist of Wellington Street. In association with these trees Mr. Buder is about to make a rock garden, and we understand that the Porthywaen Lime Company, Limited, Oswestry, are supplying the stone, which is Welsh mountain limestone. It will be of considerable interest to note which plants thrive in an atmosphere that is far from ideal for the bulk of alpine subjects.

Our Special Rose Number.—Now that the season for planting Roses will soon be with us, a great many of our readers will require information respecting the best Roses for various purposes. Our next issue will therefore be mainly devoted to the Queen of Flowers, and we think it will be the best and most interesting Rose Number ever published. Among those who are contributing are the Rev. J. H. Pemberton (president of the National Rose Society), Mr. George Laing Paul, Miss Jekyll (who gives a plan of a Rose garden with the Roses arranged according to their colours), Miss Langton (who writes on the best Roses for table decoration) and Mr. H. E. Molyneux, while our regular contributor "Danecroft" will give some particularly useful information about the best Roses for bedding. This issue will be considerably enlarged and beautifully illustrated, and a coloured plate of Rose Duchess of Wellington will be included. The price will, as usual, be one penny.

The American Smoke Tree.—The value of this tree in our gardens is largely confined to its autumn beauty, and it is more than worth growing for the gorgeous tints assumed at this season. Among the many trees and shrubs which are now fast assuming or have taken on their autumn colour at Kew, the glowing foliage of the American Smoke Tree, or Chittam Wood (*Rhus cotinoides*), is particularly noticeable. The best examples are three tall bushes in a bed near the Victoria Gate. So vivid or glowing are the rich orange scarlet leaves that they might, with the sun shining on them, be almost described as fire-like. Inspection of the many other beautiful shrubs and trees in their autumn garb does not reveal anything quite like the glow in the leaves of this *Rhus*. Experience in its cultivation seems to show that the colouring is better when the shrubs are planted in light, sandy soil without the addition of manure or rich turfy loam.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose General Macarthur.—I think a likely explanation of this splendid dark Rose failing in some gardens and taking mildew in others, as mentioned on page 446, issue September 7, may be that they are budded on the Manetti stock. I have a long row on the Briar, and they are quite free from mildew and blooming gloriously now (September 23). We have quite discarded the Manetti as a stock, in justice to buyers.—GEORGE BUNYARD, *Maidstone*.

Crinum Powellii.—I should like to confirm all that has been said in praise of the above plant on page 475, issue September 21, and would add a further word on behalf of its noble foliage. Arching over from the centre of the plant, the clean, shiny leaves give it a handsome appearance, especially with several off-growths coming up around the parent bulb as they have done with us. A few of our longest leaves are 5 feet in length. For protection in winter a covering of ashes is placed over it as the foliage dies away.—C. T. *Higgate*.

Crimson Hybrid Tea Roses.—In reply to "Rubrum," page 474, issue September 21, I find the best, and to many the least known, crimson Hybrid Tea Rose is Château de Clos Vougeot. It has flowered in Yorkshire throughout the whole of this sunless summer, and never loses its colour as do the other crimson Roses. It is also deliciously fragrant.—B. K. G., *Yorkshire*. [We agree with our correspondent respecting the colour and fragrance of this Rose. During the scorching days of last year it was the only crimson variety that did not lose its colour with us. Its ungainly habit, however, is a serious drawback for bedding purposes.—ED.]

Hollyhocks.—Early October is a good time to plant Hollyhocks, and they are seen to the best advantage planted at the back of the herbaceous border, on the outskirts of the shrubbery, or a dozen planted together to form a conspicuous group in some corner. They do best in a good, rich, deep, well-manned soil. The noble spikes of rosette-like blooms in such varied colours are very effective from July until long after the autumn frosts. Disease is prevalent among Hollyhocks, more so in some districts than others. One good preventive is one pint of slaked lime, one pint of soot and 1oz. of flowers of sulphur, well mixed together and dusted over the plant, three or four times during the growing season. Early in the day or late in the evening is the best time to sprinkle them.—J. L. E.

Woolly Aphis on Auriculas.—I do not think the woolly aphis, referred to on page 445, issue September 7, really does any harm to the plants, but at the same time it should be kept down, if only for the sake of appearance. I was particularly interested in reading Mr. Savory's remarks regarding the use of methylated spirit, and I can fully bear out Mr. T. Shepherd's statement. For the last three years I have employed it freely at the time of repotting, and later in the season used it around the collars of the plants whenever the woolly aphis appeared, and with good results. Tobacco powder is also effective, while if the frames are vaporised occasionally with N.L. All, those on the surface are destroyed. When repotting I always endeavour to use a fresh lot of pots, and quite clean crocks for drainage purposes. Auriculas

are growing exceptionally well this year, the cool, damp weather just suiting their requirements. This probably accounts for so many pushing up flower-spikes, particularly among the seedlings. Rose General Macarthur, referred to on page 446, issue September 7, has been covered with mildew for two months; but this is an exceptional season, and hitherto I have never discovered any of the disease on this really grand Rose.—S. T.

A Beautiful New Zealand Tree.—In THE GARDEN of June 8 there is, in an article entitled "Hardy Shrubs with Pea-shaped Flowers," mention made of *Edwardsia grandiflora* (*Sophora tetraptera*). This tree is a native of New Zealand, where it is very common even in the towns, while in country districts it is not an uncommon thing to see whole forests of it. With New Zealanders it heralds the coming of spring, as does the Daffodil in England. The Maori name for it is Kowhai, and the flower is singularly beautiful. It is of a deep gold colour, and the flowers hang down from the branches in great clusters. So popular has the flower become of late years that suggestions that it should be made the New Zealand national flower have been receiving a good deal of attention, and one or two towns now celebrate Kowhai Day as Wattle Day is celebrated in Australia. Kowhai comes into bloom here late in August or early in September. Its appearance is generally simultaneous with several days of wind and rain; hence the term "kowhai fresh" is often applied to bad weather in early spring. During these days the blossoms are considerably blown about, but they come out in full a few days afterwards and bloom for two or three weeks. It is a most beautiful sight to see a Kowhai forest in bloom in September.—MONA MACKAY, *Auckland, New Zealand*.

Good Trees for Autumn Tints.—The spell of dry, sunny weather experienced during September seems to have had the effect of developing the autumn tints to a much greater extent than at one time appeared probable. One of the outstanding features in the Botanic Gardens during the past two weeks has been a tree of the Sweet Buckeye (*Æsculus flava*). This tree changes to a most beautiful golden, almost orange, yellow, and never fails to give a delightful display every autumn. In no year do I remember the common Horse Chestnut giving a finer display. The leaves of this change in instalments, as it were, and patches of deep bronzy red have developed all over many of the trees. *Pyrus lobata*, or, as it is often called, *Mespilus Smithii*, changes in much the same way, the bright patches of red at intervals over the tree having a most pleasing effect. Every leaf of *Acer colchicum* is now changing to a delightful shade of yellow, and it continues to give its display over a fairly-long period. In no way behind it in point of beauty and effectiveness is *A. saccharinum*, the Sugar Maple. Other trees with yellow foliage, or changing to yellow, are *Populus nigra betulifolia*, more golden even than the Golden Poplar itself at this time. The Golden Catalpa must also be included, while the Elms, especially the common field Elm, will presently change their colour and don a garb of a most pleasing yellow. Among the trees with more brilliantly-tinted foliage, the Plum-leaved Thorn (*Cratægus prunifolia*) stands out conspicuously. The foliage of this is brilliant in the extreme, two finely-grown trees in the park here being the subject of much interest and admiration. When bearing a good crop of their large, deep red haws, the effect is greatly enhanced. *Parrotia persica* and *Rhus glabra*, with their glorious colouring, will presently

take up the story, while the many varieties of Japanese Maples are too well known to require mention.—J. D. HALLIBURTON, *Botanic Gardens, Bath*.

The Merodon Grub in Daffodil Bulbs.—I fear that many Daffodil-lovers may have an unpleasant surprise waiting for them next spring, as this pest seems to be very numerous this year. I have had consignments of bulbs procured from five different growers, and in each case have found one or more grubs in the stock. The chief points of interest appear to be these: First, that bulbs apparently quite sound in the middle of August were found "occupied" a month later. In one case I went over a stock of Citron on September 21, finding five grubs (two in one bulb). On the 27th, on a final overhauling before planting, three more were discovered, although the previous week's search had been very thorough. Secondly, bulbs which for any reason are damp seem to show signs of the grub more distinctly than when dry. Thirdly, that late planting, though in many ways undesirable, does give the grower more opportunity of making sure that his stock is sound. In this case it is not the "early bird that catches the worm." Lastly, I think that buyers should avoid blaming the growers if they find that any bulbs purchased include the grub, for it has been proved to me that the unfortunate grower, pinch he never so hard, cannot be certain of locating the enemy, who may reveal himself to the buyer a week or so later. I should like to add that in the case of twenty-eight bulbs infested, the grub apparently on each occasion entered by the base.—CAPTAIN.

An Experiment with Sweet Peas.—Being fond of experimenting in the growing of plants, and thinking I would try my hand at Sweet Peas, I did so in a small way this year for the first time. In February last I planted ten seeds each of eighteen varieties in boxes. Almost every seed came up and made a strong little plant (I got the finest seed procurable from an eminent firm, and they all came true). I planted them out in butter-tubs from the grocer in very rich, black soil, and stood them in a row on a sunny path in the kitchen garden. They had chemical and liquid manure, and their roots were always kept moist. At the beginning of July they were in full bloom, 8 feet high from the ground, and were in a thoroughly strong, healthy state. I cut off the blooms daily. The third week in July, when the weather turned very hot, the lowest leaves on the plants began to turn yellow, every day more of them, and then the stalk from the ground upwards. I watched them for about a week becoming a little more dried and yellow each day. When this state had reached about halfway up the plants, I took action. The tubs were carried into the deep shade of Cherry and Plum trees, and were stood, two or three together, where their tops just touched the lowest branches. All the buds were removed, fresh earth was put about the roots and the hose turned on to them. The hose was turned on three or four times a day. They were kept dripping wet, and often had a last hosing at nine o'clock at night. Some of the leaves were marked so that I could watch them. At the end of a week I began to notice a change in them, the yellowing ceased, the stalks began swelling and turning green again. They picked up rapidly, and I soon began feeding again. They have remained under the trees ever since, fine green plants. Some of them have run up into the branches, where I find it difficult to get the blooms. *Flora Norton*, *Royal Purple* and *Doris Usher* are still blooming well.—C. L. COX.

Calceolaria amplexicaulis.—On page 458, issue September 14, "F. G. P." has a note on the above-named plant. He is quite right in strongly recommending it as a good bedding-out plant. I wish to also draw readers' attention to the fact that this *Calceolaria* is excellent for flowering in a dwelling-room window and in a cold greenhouse. When so grown, the plants flower quite early in the season and make a fine display. Many years ago I first saw them growing in sunny windows, and they were certainly very striking. The rooted cuttings may be wintered in a cold greenhouse or in a frame facing the south.—G. G.

Rose Sunburst.—I note your correspondent's remarks *re* this variety on page 474, issue September 21, but I think after he has grown it for another year he will be pleasantly surprised. The peculiarity of Sunburst is that the centre bud for the first flower, or, as *Chrysanthemum*-growers call it, the "crown bud," comes paler than those for the second crop of flowers. It should be disbudded accordingly. Just as *Mme. A. Chateau* is the most ideal of the older Roses, comprising as it does all that is ideal in the great points of colour, habit of plant, perfume, form of flower and, not least, lasting qualities, so I believe Sunburst will prove the best in Roses of its colour, for, except in the above-mentioned one weak point, it appears to possess most of all those qualities that go to make a great Rose.—LAURENCE J. COOK, *Bush Hill Park, Enfield.*

Euphorbia palustris.—Though many *Euphorbias* are looked upon as dull plants, curious but not very beautiful, there are a few that stand out during their flowering season as some of the showiest of garden plants. Such is the large-growing species shown in the accompanying illustration. This season everyone who caught sight of the mass of brilliant yellow bracts asked, while still far from the plant, what that fine thing was. The tone of yellow is singularly vivid in sunlight, just the colour of a wash of pure gamboge while still wet, and the picture shows what a mass of flower-heads the plant bears. It is widely spread in Europe as a wild plant, but rarely seen in gardens. Mine was given me by that accomplished and generous gardener, the late Mrs. Robb, one of the many good things that she gave me, and now remind me of happy days in her wonderful garden at Liphook. Although the specific name suggests the bog garden for this plant, it thrives well in the ordinary border, and mine reaches some 4 feet in height when in flower, exceeding it considerably when the side growths spring up and reach above the seeding heads. That, perhaps, is its one fault—it takes up so much space after flowering by making so many and such long, barren side shoots. I cut away a great many of them, and the plant has never shown any resentment for such treatment as yet.—E. A. BOWLES, *Waltham Cross.*

FORTHCOMING EVENTS.

October 8.—Royal Horticultural Society's Meeting and Exhibition. Lecture at 3 p.m. by Dr. Charles Crowther on "The Influence of Atmospheric Impurities on Vegetation."

October 9.—East Anglian Horticultural Club's Meeting. Lecture by Mr. C. H. Fox on "Deciduous Flowering Trees and Shrubs."

October 10.—Royal Horticultural Society's Autumn Show of British-grown Fruits (two days).

October 11.—Annual Conference of Affiliated Mutual Improvement Societies at the Royal Horticultural Society's Hall, Westminster.

THE ROSE GARDEN.

NOTES ON NEWER ROSES.

IT is pleasant to be able to take up one's pen again and to jot down a few notes on such a topic, it was even pleasanter to be able, after nearly two years' existence without a garden, to start growing Roses again.

During the gardenless period one tried to realise that it was "better to have loved and lost than never to have loved at all," but it did little to compensate one for the wrench of parting with a garden that may have been a little one. Still, in my case it was particularly my own, having grown out of the side of a bare chalk hill. But that period is behind me. It had the advantage of compelling me to start afresh, and, with

ton in a garden that was formerly a gravel-pit, but with such soil as it possesses of the very best

All plants were pruned particularly hard, and with a few exceptions, where to do so would be contrary to experience and practice, I do not think 3 inches of growth was left above ground. With these preliminary remarks as to the general circumstances, I hope to be able to give readers my experience of all the newer Roses introduced during the last three years by the leading raisers in Great Britain and Ireland, as well as the best of the Continental raisers. I have also had the additional advantage of visiting this year the nurseries of many of the raisers and seeing the Roses and the new seedlings growing at their birthplace, an important factor when dealing with new varieties. I will first of all deal with the Roses capable of



EUPHORBIA PALUSTRIS, A RARE SPECIES, IN MR. E. A. BOWLES' GARDEN.

the help of some of my Rose-growing friends, to stock the new garden with only the choicest and best.

Planted in 1911, the Roses came through the winter without a single loss, and growing in maiden soil (the top spit of an adjoining meadow—that desideratum that is often asked for but so seldom obtained), they have done wonderfully well; and although the year has not altogether been ideal from the Rose-grower's point of view, yet we in Hampshire, with the exception of the extreme earliness of the season (I had Roses from April 19 onwards, *Rosa sinica Anemone* on a fence facing due east being in full flower on that date), have had little cause to grumble. The flowers, having been grown without a check, were of high quality and splendid colour.

The newer Roses, of which I had rather more than two hundred plants, did particularly well, and if these notes appear somewhat highly coloured, it will be due to that reason and that reason only. I shall endeavour, as far as I am able, to set down the behaviour of each plant as grown in Southamp-

ton producing exhibition flowers, and then the garden and decorative varieties, including climbers.

Southampton. HERBERT E. MOLYNEUX.

(To be continued.)

ROSE IRISH FLAME.

MESSRS. A. DICKSON AND SONS of Newtownards first gave us the wonderful Irish Elegance, which even now is one of the most popular of single Roses, and now they have produced this gem, which will be sought after for every garden. It is really remarkable that two gold medals should be awarded to two decorative Roses this year, and it speaks much for the popularity of this type of flower. As its name implies, Irish Flame is of that ruddy hue which among Roses, as indeed any flower, is ever welcome, and I can imagine that in the near future it will be used for table decoration, in conjunction with Old Gold and perhaps *Mme. Edouard Herriott*, something in the same way as *Lyon Rose* and *Irish Elegance* are used to-day.

DANECROFT.

MAKING A SMALL JAPANESE GARDEN.

[In Answer to a Correspondent.]

To make a small Japanese garden upon a plot of ground 24 feet by 20 feet is possible, but it will be extremely limited. If the ground is level, it will be well to throw up the soil after it has been thoroughly trenched, in order to secure more surface space in forming the design. We will assume that the centre, or thereabouts, is the present ground-level. If so, cast up the soil from one part to the other, so as to form a mound of earth of 2 feet or so in height. This will leave an excavation that can be arranged as a small pool. Do



AN INFORMAL GROUPING OF JAPANESE WINDFLOWERS FRINGED WITH HARDY CYCLAMEN. (See page 501.)

not attempt to make the design at all uniform or in any way balanced. The more informal it is, the better will be the effect when completed. It may be possible to fix a stone Japanese lantern to add to the effect. In the pool of water a small fountain-jet will add to the effect.

Upon such a limited space none but the smaller-growing and pigmy plants will be possible. For planting out, a few of the dwarf Abies or Pinus family might be used. One weeping tree, such as a standard of *Sophora japonica pendula*, would be effective. There might be room for a small plant of *Sciadopitys verticillata* (the Umbrella Pine of Japan); this requires moisture and a peaty soil. A few plants of *Iris Kämpferi* would be a distinct advantage. These should be near to, but just elevated above, the water. Upon such a space there would be no room whatever for any grass; in fact, a lawn does not enter into any but the largest arrangements. Some flat, informal stepping-stones for stepping upon, and nothing else, so provided, should be used. A few small plants in vases will, in such a limited space, be quite in keeping with the surroundings. Small Pomegranates and some tiny Acers in pots or vases will be suitable, so also, with care, will the *Retinosporas* and the Japanese Larch (*Larix leptolepis*). ANGLO-JAP.

THE FLOWER GARDEN.

SOME DAFFODIL CRITICISMS.

MAY I be allowed to make some comments on several matters contained in the interesting articles on Daffodils in your Special Bulb Number? First, I would like to endorse the commendation of Heroine by "Poeticus," as it seems to endorse my opinion, expressed last year, that "it is something better than an improved Albatross." Secondly, I challenge Mr. Shea's statement, "there exists now for the new-comer only the very barest and unlikely

if one of the most beautiful flowers (for I entirely agree with Mr. Jacob's commendation of Avalon) can come from flowers such as were its parents, why cannot the tyro hope still to score some similar success? This year I secured a wonderful blood red flat eye and a most up-to-date Poeticus from Mr. Engleheart, and I have some two hundred seeds from their pollen. Why may I not hope for something really good from such pollen used on thoroughly up-to-date flowers?

Again, there is always a possibility of getting a good thing from the crosses that might be thought to have been thoroughly worked out, as evidence my own third cross, producing King Cup from Golden Spur \times ornatus. No; the would-be hybridiser need not be put off from despair of producing something good, but let him start with good up-to-date flowers, not necessarily the very expensive ones, and work systematically, not being frightened by the work of "the men who had so very long a start," but let him take to heart the lesson taught by the play of "Milestones" and benefit by the past experience of others. By all means let him keep the most accurate statistics of his crosses and the results, as, if for nothing else, it lends interest to the hobby, and undoubtedly there is much in Mr. Shea's view that the compilation of statistics may be most valuable for determining points which are dealt with by himself and Mr. Jones.

I think Mr. Shea is nearer the mark than Mr. Jones as to the reason of the failure of so many crosses. I cannot quite follow Mr. Jones when he says "most of the pollen dried and dropped off before absorption." My idea has always been that if the stigma is in a receptive state, which means that it is sticky, when once the pollen has attached itself the impregnation has taken place, and no amount of wind will prevent the inoculation of the ova, and only a most abnormal amount of heat will prevent it; but if frost intervenes it is, to my mind, quite another matter, as in that case the whole fertilising powers are killed by the sun bursting the frosted anatomy of the style. This year I made some four hundred and fifty crosses, mostly on a small number of flowers in each case, and I obtained seed from about two hundred. Many of the crosses were on, and by pollen of, my own seedlings, many of the first year's flowering, and therefore entirely unknown quantities. I have analysed the results of the work on named flowers, but not my own seedlings, and the result is that out of one hundred and twenty-six trumpet crosses forty-seven were successful and seventy-nine failed, out of seventy-three Medio crosses four were successful and sixty-nine failed, and out of ninety-eight Parvi crosses ten were successful and eighty-eight failed. I have not taken my own seedlings, as without considerable labour of reference I cannot be sure of them being trumpets, Medio or Parvi. Roughly speaking, my results seem to support Mr. Shea's and Mr. Jones' suggestion that the trumpet flowers were more fertile this year, be the reason what it may.

One thing I noticed was the fecundity of maiden flowers. I hoped to restrict the number of seeds this year, as I find my stock of seedlings getting beyond my power to attend to; but owing to this fecundity I found a large number of my maiden seedlings that I had not worked on with pods full of seeds, and could not resist saving and sowing them, and thus adding largely to my stock of seed. A considerable number of them were late flowers.

I think the hope of the present-day hybridist, both among the veteran and the young recruits,

chance of producing new varieties at all comparable with those created by the men who had so long a start." With the concluding words of his paragraph, "they cannot now be overtaken," perhaps one must agree, as they have such an accumulation of good things that in a number of good things they must continue to lead, but I contend that there are plenty of chances of producing new varieties comparable with, and better than, those created "by the men who had so long a start." It must be remembered that, to begin with, the pioneers had to experiment with flowers of inferior size, substance and colour, and the present hybridiser has almost too many flowers that years ago would have been considered by the pioneers almost impossible of attainment. Mr. Shea's cry is the cry of despair, and is not calculated to encourage the would-be hybridiser, as the joys of a statistician are hardly those to attract the young hybridiser! I gladly welcome Mr. Shea's desire for statistics in our mutual hobby, but do not hold out that as the *only* inducement for continuing or becoming a Daffodil hybridist!

The article on Avalon seems to me to contain a most happy answer to Mr. Shea's pessimism. This beautiful flower is stated to be the result of crossing Beacon with a Poet. Now, surely

is the new seedling flowers. From quite an indifferent seedling from Almira with Thelena pollen I had a flower this year which I fondly hope may be considered to be "comparable" with some of the flowers in the present first flight. *Nil desperandum.*

C. LEMESLE ADAMS.

Pendeford Hall, Wolverhampton.

SEASONABLE NOTES ON CARNATIONS.

Plants in Beds.—It is well within the bounds of possibility that all the Carnations rooted from layers put down in July and August have not yet reached their permanent positions, and, where this is the case, it is strongly urged that the work shall be accomplished immediately. In light, open soils which are pleasantly warm, the planting may be done later than on colder, close grounds; but in no case is it wise or desirable to defer the work any longer than is absolutely necessary, for the simple reason that the later it is finished, the less opportunity will the roots have to secure a satisfactory hold before the winter. Plants that were placed in their positions in the beds and borders a short time back will be established, and unless the conditions are peculiarly unfavourable, it is improbable that they will cause the grower the slightest anxiety or worry through the winter. It is, of course, more than probable that some of them will lift from the ground in severe frosts; but this is a contingency which the cultivator expects, and therefore he is ready to remedy it by replacing the plants as required.

Hoeing.—There are few, if any, details of cultivation in connection with these delightful flowers of more importance than hoeing, and, provided it is done carefully when the soil is in suitable condition, it is impossible to do it too frequently. In the first place, it opens up the surface of the soil, and thus facilitates the admission of rain, which is promptly followed by the invigorating and sweetening fresh air; and, in the second place, it positively prevents the establishment of weeds. It has been suggested that care shall be used in carrying out the work, and this fact must be impressed, since carelessness will certainly result in some of the plants being injured by the blade of the tool, and others will probably have their roots disturbed. Either condition of affairs is prejudicial to the continued satisfactory progress of the plants. It is essential, too, that no attempt shall be made to hoe when the ground is wet, but at any other time it may advantageously be done.

Surface Manuring or Mulching.—Where there is a plentiful supply of short, sweet manure, a surface dressing or mulching beneath the Carnations cannot prove otherwise than beneficial to the plants. The first thing is to loosen the surface with a hoe, fork, or even a bluntly-pointed stick, according to convenience, and then spread down the covering material. It is not wise to allow this to settle down into a close mass, as it is rather prone to do after heavy rains, as it then becomes impenetrable by water and air, thus creating a particularly undesirable condition of affairs; but this is easily obviated by occasional loosening with a small

fork or a pointed stick. In an open state it presents no obstacle whatever to the passage of rain-water, and if this can pass through, it is certain that fresh air will follow. There is, then, the additional advantage of the food virtues in the manure being carried down into the soil for appropriation by the roots of the plants when they are active.

Plants in Frames.—It has become the excellent practice to have a reserve stock of plants, especially of the choicest and yellow-ground varieties, in small pots in cold frames, because the losses in the winter may be rather serious, and are almost sure to be so with those of tender constitution in low-lying gardens where the soil is on the strong side. Among the plants thus treated, reasonable attention will ensure them passing the winter in perfect safety. The danger with amateurs lies in coddling. In no circumstances is this permissible. The more fresh air that can be admitted to the frames, the better the plants will thrive, and to this end the lights should be off whenever the weather will permit of it, and must never be quite closed, even though there be frosts or heavy rains. The latter do more harm than the former; hence the importance of some protection when they are falling. F. R.

BORDER FLOWERS IN EARLY AUTUMN.

The illustrations on this page and page 500 should prove of special interest to those who garden for

flowers, with sword-like foliage, are those of *Watsonia Ardernei alba*. These plants require much the same treatment as *Gladioli*, and succeed best when grown on a warm, sunny border. The flowers of both *Phloxes* and *Watsonias* are thrown out in bold relief against a dark background of hardy shrubs. *Gladioli* of the *branchleyensis* type might be used instead of *Watsonias*, as they flower about the same time. When planting the *Phloxes* in late autumn, room should be left for the *Gladioli* or *Watsonias*, which would be planted at the end of March or early in April. This is a simple effect that might well be carried out in many gardens where flowers at the fall of the year are appreciated.

EARTHENWARE RINGS FOR BULBS.

IN THE GARDEN of June 14, 1884, page 485, there is an article on earthenware rings for confining bulbs in borders. Can any of your readers tell me whether anything came of this suggestion? Were these rings ever manufactured and put on the market, and, if so, by whom? as it strikes me that many amateurs would, in the present day, be glad of such arrangements, if at all suitable, for the better regulating of their borders. J. P.

[As this is a subject that will be of general interest just now, we reprint below the article referred to by our correspondent.—Ed.]

EARTHENWARE RINGS FOR BULBS.

LIKE many other amateurs, I am fond of growing bulbous plants, but, owing to the fact that I have



A BORDER OF PHLOXES AND WATSONIAS FOR EARLY AUTUMN EFFECT.

September and October effect. The illustration on page 500 depicts an informal grouping of Japanese Windflowers (*Anemone japonica*) fringed with clusters of low-growing hardy *Cyclamen*. This happy effect is taken from Gunnersbury House Gardens, where Mr. Hudson, with his usual gardening skill, succeeds in obtaining beautiful colour blendings with autumn flowers and foliage. Japanese *Anemones* are particularly useful for growing under the shade of trees, while the autumn-flowered *Cyclamen*, *C. europæum* and *C. hederæfolium*, revel under such conditions.

The illustration on this page depicts a border of *Phloxes* and *Watsonias* at Kew. The *Phloxes* are mainly white varieties, but pale blues and pinks are also included. The tall spikes of white

limited space, and must needs grow them in mixed borders, and that when grown there their exact whereabouts often get forgotten, and in the moving of other plants and the necessary work of the border the clumps get "dug" in half and the bulbs scattered over the border, producing a most untidy effect, and that some bulbs like the *Tritonias* have a disposition to wander and come up in the heart of another plant, I gave up bulb-growing in despair till I thought if I got something that would be strong enough to resist the blow of a spade, and at the same time confine the bulbs to the space allotted to them, I might perhaps be able again to see my favourites in their old quarters. I went to our brickyard and asked the foreman when he was making 9-inch drain-tiles to cut me

off as the clay form issued from the machine 6-inch lengths of tile, and to burn them specially. On receiving them I at once planted my Tulips, Lilies, &c., in clumps in these rings; the result has been most satisfactory. The rings are plunged into the border 2 inches underground, and the bulbs planted in them and filled up, and they are safe. Their locality does not need marking, for when the spade is at work the ring proclaims its existence, and so is easily avoided. At the same time, being an inch thick, and supported on all sides by the soil, it cannot be broken easily. The advantages are that bulbs needing peat can be grown in a mixed border by merely filling up the ring with the necessary soil; the sides of the pot or ring prevent wandering roots from eating up the food intended for the bulbs.

Let us suppose that five Tulips are put in the first instance into a 9-inch ring; they can be left with advantage two years at least, by which time the size of the clump will proclaim, by the space it occupies, that the ring is pretty full of bulbs, and in the autumn, when the borders are gone over, the ring is just turned out with a clod of earth filling up its calibre with the bulbs which are shaken out, the largest returned, and the rest are stock in hand for the nursery or for giving away. As the rings are straight-sided and have no bottoms, the bulbs stand crowding well, as they can root downward without interruption into the border, and the usual autumn mulch feeds them as well, and the work of planting must not be done more than once in two or three years. I have now had others made of 6 inches and 4 inches in diameter for smaller clumps and smaller bulbs. The smallest size is used for edgings of small bulbs, such as Crocuses, Snowdrops, Squills, &c.; the larger ones do well for Lilies, Tulips, Hyacinths, Gladioli, &c. The 9-inch rings cost me 4d. each, and with ordinary care will last a lifetime; the 6-inch cost 13s. a hundred, and the 4-inch 6s. 6d. a hundred. They can be made at any brickyard, and if a greater demand was had for them, they might be made much cheaper, as they take up little room, and the three sizes can be nested together and take up only the room of the 9-inch ring, an advantage where they have to be sent a distance. They economise bulbs, as each little corm or bulb is easily found and preserved, and as the whole clump comes up with the ring, no stray bulbets get into the border to disfigure its neatness next season.

Nayland, Colchester.

H. D. PALMER.

ACHILLEA PTARMICA PERRY'S WHITE.

This is a new variety possessing many good qualities as a garden flower. It is a seedling of Achillea Ptarmica, with double snow white flowers about an inch across and produced in the wildest profusion. It is much larger-flowered than

either Bouquet or The Pearl, and its flowering season extends from June till late autumn. Growing over three feet in height, with stiff, rigid and much branching stems, it is without question a most useful subject for cutting or decorative purposes. This acquisition was raised at Mr. Amos Perry's Hardy Plant Farms, Enfield, Middlesex, and received an award of merit recently when shown before the Royal Horticultural Society.

A PAVED LAVENDER WALK.

In Old English gardens Lavender walks formed one of the most pleasing features, and those who are fond of old-world effects could not do better than introduce this feature in gardens of to-day.



ACHILLEA PTARMICA PERRY'S WHITE. A NEW DOUBLE-FLOWERED VARIETY INVALUABLE FOR CUTTING AND DECORATIVE PURPOSES.

Nothing could be more simple. Cuttings of Lavender root readily in the autumn if prepared from young wood and inserted in free, sandy soil under hand-lights, when they will be ready to plant out in the spring. Cuttings, when taken with a "heel," also root in the open in sandy soil, but the method of using a hand-light ensures success, and is generally preferred. The paved Lavender walk seen in the illustration on page 503 is a delightful feature of the gardens at Regal Lodge, Kentford. The bold lines of Lavender are edged with Thyme, while between the paving-stones are many little tufts of dwarf Campanulas, chiefly C. pulla and the variety Miss Willmott,

THE ROCK AND WATER GARDEN.

ROCK GARDEN PLANTS THAT FLOWER IN EARLY AUTUMN.

EVERYTHING—be it Rose, or alpine plant, or what you will—has its season, and when that is past, when the fulness of the beauty is gone, what remains, welcome though it be, constitutes but fractional parts of the greater whole we remember so well. Of no section of plants is this more true than that we know as alpine, and which inclines to yield of its fuller wealth of beauty and variety before the year has more than half run its course. Those that come to us after that time, despite their individual charms, are but few and far between, disjointed members, as it were, of a great flowering chain that had remained unbroken for months.

The passing of June, however, is usually the signal for the snapping of the last link in the chain, and though by that time alpinists should have had a good innings, yet they appear never to be quite satisfied—to be wishful for more of the wealth of spring, even amid the breath of parched July or even later. That this is the condition of things existing in most rock gardens at the time indicated few will attempt to gainsay, though it is a moot question, I think, whether the fault is not a little on the side of the planter, who, encouraging the greater flower wealth of spring and early summer, discourages—if all unwittingly—the lesser wealth that follows by and by.

In the earlier months of the year we see the incomparable flower pictures of alpine Phlox, Aubrietia, Dianthus, Candytuft and so on; but is there one among the number to surpass a spreading, well-flowered mass of the rosy pink *Convolvulus althæoides* of July? But we do not see it, or certainly only rarely, and then not always in good condition. It may be—indeed is, probably, that our rock gardens are not big enough for all—not big enough to provide representative pictures of all that is good; hence the comparative rarity of some. At Friar Park I have seen this unique subject in its fullest glory; but there is elbow-room there and the owner knows what is good. There is room, too, at Wisley, and plenty of it just now, and a few yards square of the plant well in flower would be worth a day's journey to see. Moreover, it would give fresh impetus to the cultivation of a too-little-known plant. And there are Campanulas, too—one might almost enumerate a dozen such—*Zoyssi*, *Tymonsii*, *garganica* and its forms, *fragilis*, *isophylla* and its varieties (hardy enough and perennial enough if planted in chinks of rock instead of the richer soil in the pockets), *Stansfieldii*, *White Star*, *Profusion*, to say nothing of the later-flowering varieties of the turbinate

group—which are worthy of a little more thought from those who would embrace the longest possible season of flowering. Then there is the wild *C. rotundifolia*, or Harebell, a charming plant that is worthy of inclusion in the best rock gardens where flowers are required during July and August.

In not a few instances the owners of large gardens are absent from home for weeks after midsummer, when but little encouragement is given to subjects flowering after that time. These and other things might readily constitute contributory causes for the absence of some plants and the unrepresentative display of others during some weeks of the latter part of summer. What is needed most of all, perhaps, is a rock garden on a more representative plan planted with a view to do justice to all, rather

Lysimachia Henryii and *Wahlenbergia vincaeflora*—plants of undoubted merit and utility—may all be added to the lists of late summer alpine flowers, growers of such things have no cause for repining, and much less for despair. At the same time, there are good plants other than novelties or reintroductions meriting all consideration, and one recalls *Zauschneria*, *Polygonum vacciniifolium* (a rock-draping mass of this almost challenges description), *Gentiana septemfida*, *G. Andrewsii* (good in its unopened bud colour), *Sternbergia*, *Crocus*, *Cyclamen* and others which might profitably be used to prolong the season of flowering in this department. Just what is available and what most useful are questions worth pursuing, while of even greater moment is the increase of some.

THE GREENHOUSE.

MINIATURE HYACINTHS.

THERE is no doubt the trade in Hyacinths in Holland is nothing like what it was twenty-five or thirty years ago. Daffodils and "taste" account for the decline. Ask any old firm round about Haarlem or Hillegom how many Daffodils they grew then and how many now? The flower-lover of the twentieth century must have Daffodils in his garden and in his greenhouse, and someone has to supply him with bulbs. Again, the tide of taste has changed. The formal has given place to the informal, and heaviness to



A PAVED LAVENDER WALK WITH TUFTS OF CAMPANULAS GROWING BETWEEN THE STONES.

than, as is often the case, to permit the free-flowering and showy to predominate, to the exclusion of much else that is good or even more worthy. In private gardens, naturally, the season of greater gaiety is at the direction or wish of the owner, while at Kew or at Wisley, whither gardeners and others go for inspiration and education, the idea of more representative planting, as opposed to display work covering shorter periods of time, might reasonably receive studious thought.

In certain directions late-flowering alpine plants are asked for—almost clamoured for—hence there is need to look around to see what is to be had. Each year, too, is giving evidences anew that the supplies are not exhausted; and when in a single season such good things as *Astilbe simplicifolia*,

The following are among good things worthy of consideration, though the list makes no pretence at completeness: *Campanulas waldsteiniana*, *Zoysii*, *Profusion*, *Stansfieldii*, *fragilis*, *isophylla*, *garganica*, *Tymonsii*, *White Star* and *rotundifolia* (Harebell), *Cyananthus lobatus*, *Erigeron mucronatus*, *Polygonum vacciniifolium*, *empetrifolium* and affine (*Brunonis*), *Lysimachia Henryii*, *Saxifraga Fortunei*, *Zauschneria californica*, *Gentianas Andrewsii* and *septemfida*, *Sternbergias*, *Crocus* species in variety, *Sedum spurium* in variety, *Ceratostigma plumbaginoides*, *Silene alpestris*, *Mesembryanthemum uncinatum*, *Androsace lanuginosa*, *Wahlenbergia vincaeflora*, *Achilleas* in variety, *Acanas* and *Eriogonum umbellatum*.

Hampton Hill.

E. H. JENKINS.

lightness. The stiff spike of the Hyacinth has been steadily declining in popular favour.

For some time now I have been preaching to the bulb-dealers of Holland as their means of salvation miniature Hyacinths. The invariable answer was, "They won't pay to grow." I think they must have found out they were mistaken. Every 1912 list that I have taken up has them in, and I am told by the wholesale growers that the sales of these small bulbs have increased enormously during the last two or three years. Except for showing in competition they are suitable for every purpose for which the large ones were formerly used. Out of doors they are not so top-heavy, and do not need quite the same care in staking. In pots they are lighter-looking, and three miniatures

in a 5-inch pot are less stiff and formal than one large fat spike. Their culture is precisely the same.

A point of interest is the *depth* of the pot or pan. I have long come to the conclusion that the ordinary ones are too deep, especially in the larger sizes, and that all Tulips, Hyacinths and Daffodils look far better in shallower ones. I think readers will agree that there is not much wrong with the miniature Hyacinths illustrated on this page. It will be noted that the pot used is one of those which I am advocating, and that its diminished depth has been no detriment to their growth. It may also be seen that it has a glazed surface, and that it rests on a special shaped stand. This latter I invented to take the place of the usual saucer or plate. It is much neater and is just as effective. The glazed pot is provided with ordinary drainage like any other. It is brown in colour.

As the culture of the miniature Hyacinths is the same as that of the larger and older bulbs, so there is no difference in the varieties. A miniature L'Innocence is really a two or three year old bulb, when second size and top size are two or three years older still. The following is a good selection: White—Albertine (early), L'Innocence, and Mr. Plimsoll (palest blush); pink—General de Wet, Charles Dickens, Lady Derby and L'Ornement Rose; red—General Pelissier (early), Roi des Belges, Homerus (rose, very early), Gertrude and La Victoire (early, new and very fine); dark blue—King of the Blues, Marie and Baron van Tuyll; pale blue—La Peyrouse, Johan, Lord Derby and Schotel; mauve and violet—Lord Balfour and Sir William Mansfield; yellow—Fleur d'Or and Yellow Hammer. JOSEPH JACOB.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Odontoglossum Woodroffeæ (O. Rossii rubescens × O. Queen Alexandra).—The sepals and petals of this handsome form are of brownish crimson irregularly barred yellow and cream. The purplish lip is emphasised by a white disc. It is a most distinct hybrid. From Mr. E. H. Davidson, Twyford.

AWARDS OF MERIT.

Odontoglossum Neptune (O. crispum × O. nebulosum).—The sepals and petals are white, with crimson blotches. The lip is also white and irregularly marked crimson.

Odontioda Margarita (O. madrense × C. noetzhiana).—This is one of the most distinct hybrid Odontiodas we have seen, the flowers having the unmistakable colour combination of some so-called pink-flowered Snapdragons, and in which pink and brown and yellow combine. These two fine novelties came from M. H. Graire, St. Fuscien, France.

Cattleya Lord Rothschild albescens.—A very handsome variety of large size. The wide, winged

sepals and petals are white, the bold, fringed lip of golden hue, heavily veined purple and tipped with pink. A very striking and beautiful novelty. From Messrs. J. and A. McBean, Hayward's Heath, Sussex.

Lælio-Cattleya hastediana (L. Henry Greenwood × C. aurea).—The sepals and petals are of a lustrous rose colour, the crimson lip being heavily fringed and freely reticulated with gold at the base. Exhibited by Mr. C. J. Phillips, The Glebe, Sevenoaks.

Zygopetalum maxillaria sanderiana.—In this distinct variety the sepals are of an intense

pink, and should be effective under artificial light. From Mr. J. T. West, Brentwood, Essex.

Dahlia Johnny (Pompon).—A model-formed flower of maroon crimson shade. From Mr. J. T. West, Brentwood.

Dahlia Mrs. Randall (Cactus).—The predominant colour is rosy cerise, the tips of the florets creamy white, the bases of buff yellow tone. From Messrs. James Stredwick and Son, St. Leonards.

Dahlia Jenny Wrenn (Garden Cactus).—The flowers are moderately large, the florets pink-coloured, with yellow bases. Exhibited by Messrs. James Stredwick and Sons, St. Leonards.

The foregoing Dahlias, having been adjudicated upon by a joint committee of the Royal Horticultural Society and the National Dahlia Society, carry the award of merit of the former and the first-class certificate of the latter.

Chrysanthemum Mrs. Joan Carter (Single).—The colour is a rich butter yellow, the flowers of medium size. In spray form it was most attractive. From Messrs. William Wells, Limited, Merstham.

Chrysanthemum Framfield Early White.—A pure white of much merit, the crisp, paper-like rustle of the petals denoting long-keeping qualities. From Mr. Norman Davis, Framfield, Sussex.

Pentstemon Mrs. F. Fulford.—Almost a self crimson throughout, a variety of large size and high decorative excellence. From Mr. Fulton, Tarnbolton.

Rose Little Dorrit (Tea).—Quite a charming variety of a rosy peach shade, with salmony and buff suffusions. It is delightful in the bud or expanded flower, presenting quite a variety of shades in these from day to day. Exhibited by Messrs. G. Paul and Sons, The Old Nurseries, Cheshunt.

Rose George Dickson (Hybrid Tea).—A giant among Roses of all sections, a veritable peer among its fellows, and one obviously of an epoch-making character. Already a gold medallist of the National Rose Society and the recipient of honours wherever shown, this magnificent variety is destined for great popularity. It is, as it were, the very embodiment of all that is good in such as Horace Vernet, Charles Lefebvre and others not far removed

which combine the most intense of crimson-scarlet shades.

Rose Mrs. Mackellar (Hybrid Tea).—Another superb variety of creamy yellow tone and pleasing fragrance.

Rose Edward Bohane (Hybrid Tea).—This is of giant proportions and of cherry red colouring. As a bedder it should prove a most attractive sort. These three novelties were exhibited by Messrs. Alex. Dickson and Sons, Limited, Newtownards, County Down.

The foregoing plants were shown before the Royal Horticultural Society on September 24, when the awards were made.



MINIATURE HYACINTHS IN A GLAZED POT WITH STAND TO MATCH.

olive green shade and irregularly blotched dull purple. The frontal lobe is of large size and of the purest white, with violet-coloured base. Exhibited by Sir Trevor Lawrence, Bart., Dorking.

Kniphofia John Benary.—This is one of the most brilliant and attractive of the late-flowering Torch Lilies, the colour being a brilliant orange scarlet. The plant is between 5 feet and 6 feet in height. From Messrs. James Veitch and Sons, Limited, Chelsea.

Dahlia Useful.—The name is somewhat suggestive of the variety, which is of the garden decorative type and of medium size. The colour is rosy

GARDENING FOR BEGINNERS.

GREASE-BANDING FRUIT TREES.

AMONG the numerous pests which attack fruit trees, few are more annoying than the spring caterpillars. After a fine show of blossom and a good set of young fruit, a bad attack of this troublesome pest may cause nearly all of it to be shed on account of the leaves failing to supply the necessary food at a critical time.



1.—HOW TO FIX THE "MULTI- PLEX" BAND TO THE TREE STEM. SEE THAT ONE EDGE LAPS WELL OVER THE OTHER.

It is, of course, possible to spray at this juncture, but the material required is a deadly poison—arsenic—and it will, therefore, in most cases be advisable to take measures to check the pest at another season and in another manner where possible.

The alternative method is that of grease-banding. The larvæ which do most damage are those of certain winter-flying moths, which pair and lay eggs during the early autumn and winter; and from the fact that the female is wingless comes the success of this method of grease-trapping. The chrysalis, having spent the summer in the soil, hatches out from October onwards, and the female climbs the tree and lays her eggs on the younger branches, and these eggs, at the approach of spring, hatch into the destructive caterpillars which are only too well known to gardeners. The essential point of the system is to have a grease which keeps sticky during the longest possible period. The greases generally sold do not, unfortunately, last longer than about two months, and it is therefore necessary to renew them from time to time. A preparation called "Tanglefoot" is now, however, on the market, which will keep in a sticky condition for nearly a year—certainly long enough to catch all the winter moths. The only objection to it is that of cost, it being many times more expensive than the ordinary greases. When, however, efficiency is considered, it is well worth the extra price.

The second important point is that of the paper. Any soft paper will, with the winter rains and winds, soon be torn and useless, and a tough waterproof paper is therefore necessary. This is cut into suitable sizes to encircle the trunk of the tree about four feet from the ground if standard trees are to be treated, or lower if with shorter stems. Allow enough paper to fold it over double at the joint, or it may blow apart in strong winds. Also for the same reason the joint should

be on the side away from prevalent winds. The paper is then tightly tied about one inch from both top and bottom, choosing a position where the bark is smooth to prevent the insects from walking up between the band and the tree.

The grease is then applied with a flat piece of wood about an inch wide. A mistake is often made in getting too thin and wide a layer. A small, thick layer resists evaporation much better and is just as effective, one 2 inches wide being excellent. Slight difficulty has been experienced in some cases in applying "Tanglefoot," as it is rather more viscid and less mealy than the grease. If care is taken not to put too much on at a time, it will be found to spread fairly easily. The band is now ready and requires no further attention except, in the case of the grease, a monthly visit to see if it is still sticky. If good material is used and thickly spread, it can be stirred up with a stick and a fresh surface exposed. A convenient band has been devised in Germany and sold in this country under the name of "Multiplex"; this not only serves the above purpose, but also acts as a trap for the larvæ of the Codlin moth and the Apple blossom weevil. The maggot of the Codlin moth, which is found in Apples, passes the winter in crevices of the bark in the chrysalis state, and the band, having an inner surface of corrugated paper, provides a suitable resting-place for it and the weevils when they ascend the tree in search of shelter. The band is then taken off and burned to destroy them in the spring, before they hatch out to lay their eggs on the young fruits. The outer layer of waterproof paper is specially made to take grease, the band thus serving the two purposes. The method of fixing the band is shown in the first illustration. This band ought to be put on in June for the Codlin moth, and it can then be greased in October and burned in the spring. If the Apple blossom weevils are troublesome, the band will trap these as they ascend the tree. Thus with this new band we have it on the tree nearly all the year. Early in October it is advisable to put on the bands and to have them greased as a trap for the

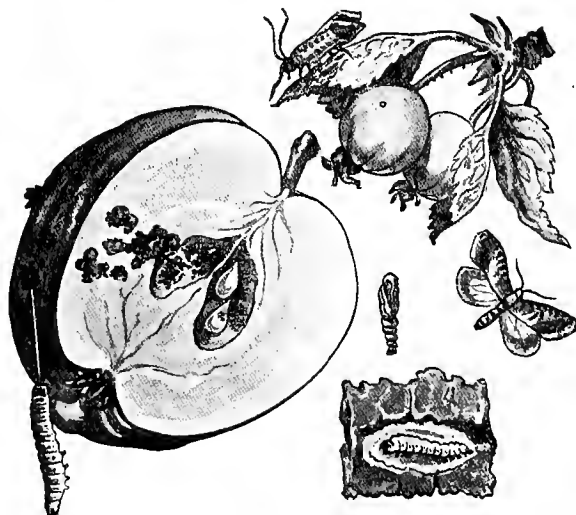


2.—APPLE BLOSSOM WEEVIL. THE LARVA OF THIS IS TRAPPED BY GETTING BETWEEN THE INNER AND OUTER PAPERS.

winter moth. The same bands may, if necessary, be left on to catch the weevil and Codlin moth larvæ. In the March following the bands should be burnt, and new ones put on the following June to take their places.

PROPAGATING BEDDING CALCEOLARIAS.

THE cuttings may be inserted any time from the middle of September to the middle of October. Although many thousands of cuttings are taken quite a month earlier, the resultant plants are not often as good as those raised from cuttings put in later. The wood of the Calceolaria is somewhat hard during the summer and the very early part of autumn, and when such wood is inserted it does not callus and form roots as soon as the cuttings made of softer wood. The best shoots for cuttings are those found near the base of the old plants, and it suffices if these are merely slipped off by gentle pressure with the fingers and thumb of one hand. The end of the stem should then be made smooth by paring it off with a very sharp knife. Usually these cuttings are inserted in frames facing the north, and, although they do fairly well in them, I believe in putting them in a frame facing the south. There is no strong sunshine from the date of insertion until the following spring, and only a light shading is needed. The cuttings root readily enough, and in the warm weather of springtime they grow very sturdily and are not drawn up as weakly as those grown for so many weeks in a north aspect. The bed should be composed of loam, leaf-soil and sand, with sand on the surface half an inch deep. Make all firm, insert the cuttings 3 inches apart each way, water, close the lights, and shade from any bright sunshine for a few weeks. When roots form, ventilate freely. A cold frame has many uses in the winter months. No amateur should be without one, and for striking Calceolaria cuttings it is all that can be desired. It is important that sturdy cuttings should be selected; then, with a reasonable amount of care, success will be ensured. **B.**



3.—THE CODLIN MOTH. THE LARVÆ WILL SPEND THE WINTER BETWEEN THE TWO LAYERS OF PAPER AND CAN BE BURNED IN SPRING.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Lobelia cardinalis.—To preserve this plant through the winter months the roots should, when the plants have had their foliage spoiled by frost, be lifted, the stems cut off and stored in a box in leaf-soil or old potting material, and placed in a cool house and watered in. Afterwards little water will be needed, and, whenever possible, a free circulation of air should be given to prevent damping off.

Autumn-flowering Chrysanthemums.—Late-blooming varieties should, if possible, be protected at night from frosts, and the covering removed by day. Cut off any faded blooms, see that the plants do not lack support, and generally keep as tidy as possible. The Pompon varieties are not nearly so fashionable or frequently met with, but are attractive when planted at the foot of a wall, where, except for an occasional division and looping up of the growths, they are very little trouble.

Tuberous-rooted Begonias.—When the growths are cut down by frosts, the tubers, if required for another season, or perhaps the best of them that have previously been marked, may be lifted and placed for a few days or so in a light position under cover, so that the tubers may become thoroughly ripened before storing away for the winter and the foliage more or less naturally parted.

East Lothian Stocks.—I fully intended to mention a week or two earlier the autumn sowing of these. If not already done, sow seed at once in a box or pan of fine soil and place in a cold frame. Then, as soon as the seedlings are large enough, transplant into a frame or boxes and winter until the opportunity arrives for planting in the spring. For continuance of blooming these are indispensable, and their good growth admits of the greater number of the singles being removed as soon as visible, thus allowing the doubles a greater amount of space to develop.

Plants Under Glass.

Zonal Pelargoniums.—When housing these plants they should be placed as near to the glass as possible and not be overcrowded, otherwise the growth made will be weak and the resulting flowers poor. Avoid overwatering, but occasionally assist the plants with stimulants, and for a time avoid too dry an atmosphere. Look out for the small green caterpillars, which soon play havoc with the foliage. If they cannot be seen, they may often-times be dislodged by holding the pot firmly, the foliage downwards, and giving a sharp tap to the pot with the other hand.

Liliums.—Pot up the bulbs as soon as they arrive and stand closely together in a cold frame. They like a compost of good fibrous loam enriched with some powdered cow or sheep manure, with the addition of a little leaf-mould, finely-crushed charcoal and sand. Avoid overwatering until growth is fairly active. When potting, keep the bulb towards the bottom of the pot, so that there is room afterwards for top-dressing.

The Hardy Fruit Garden.

Picking and Storing Fruit.—Though I have once before made reference to this, I would like to add a few remarks concerning this important work. Picking should be proceeded with as the fruits become ready, choosing dry weather, and when the fruits are dry also. Handle as carefully as possible, and where space permits lay them out in a single layer. The patent trays that fit one upon the other are, I consider, ideal, especially for those who have limited room, as they are very compact and admit of a free circulation of air between the fruits.

Strawberries.—If the land has only just become vacant, planting of late runners rooted in 3-inch pots may still be carried out. A small plantation may be made to follow flowering subjects, such as Sweet Peas and Pentstemons. A complete change in this manner often results in a good growth after first breaking up the ground and giving a dressing of manure.

Fruits Under Glass.

Peaches and Nectarines.—Trees that are growing in unheated cases should, as soon as the fruits have been removed, be thoroughly well syringed,

and also watered if it is thought at all necessary. Abundance of air by day and night will help to thoroughly ripen the foliage and harden the growth, and where the lights are portable, by all means remove them entirely, unless they have to shelter plants.

Late Grapes.—Just a little fire-heat, and especially during damp weather, will help to keep the bunches in good condition. Any extra shading that was used above the foliage for helping to colour black Grapes may now be removed. A covering of straw over the borders will greatly assist in the prevention of evaporation, as well as giving the house an attractive appearance.

Preserving Grapes.—Where it is not convenient to allow the bunches to hang on the Vines, they may be well preserved by the use of bottles of water. There are one or two inventions on the market for this purpose; but, failing these, the ordinary pint and a-half wine-bottles will be found to answer the purpose admirably. They should be filled with pure water, and a pellet or two of charcoal will help to keep the water pure. Cut off the bunch with a portion of the old wood attached, and see that the stem touches the water.

The Kitchen Garden.

Spring Cabbage.—Continue to plant out the later seedlings on vacant ground, and as the work proceeds give a dusting of soot. Those that were put out last month should be assisted by frequent hoeings to ensure good plants before winter sets in.

Celery.—The work of blanching will now be in progress for the later supplies. This work entails a good amount of labour, but to ensure its good quality it must not be done slipshod. Choose fine weather and when the plant is dry, and stretch a line on either side of the row. Before commencing to earth-up see that the sticks are freed from any defective leaves and side growths. Break up the soil finely and well work in among the plants, holding the stalks together firmly so that no soil finds its way among them. For this reason, where it can be done, three men should be employed, one to walk backwards and attend to the plants, and one on either side of the row to break up the soil. This, of course, greatly expedites the work, and is really economy in working. Do not hurry to blanch the latest supplies, as the later this can be done the better the keeping properties.

Parsnips.—These need not be lifted entirely like many of the other root crops, and, being perfectly hardy, the bulk may be left in the ground, as then they are considered sweeter and better flavoured.

E. BECKETT, V.M.H.
Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Rose Cuttings.—These may be taken at any time now, choosing shoots about a foot long and inserting them 9 inches into the ground. They must be made quite firm, when frost will have no effect on them, and dry weather very little in late spring. The hybrid wichuraianas in particular strike root very freely, and they even flower the first summer; but many other Roses may be propagated in the same way. Well-matured young wood is essential.

Lifting Plants.—A watchful eye must be kept on the weather, and if plants are not protected on nights when frost is imminent, those that are wanted for another year should be lifted before being frost-bitten ever so slightly. In all cases employ pots small for the size of the plants, and as a rule it is better to stand them in a protected position out of doors for a few weeks rather than house them immediately. Some plants can be grown into quite large specimens from young material; *Calceolarias*, for instance, and these need not be preserved.

Agapanthus.—These winter well in a frost-proof structure with plenty of soil packed round and between the balls of roots. They ask for no water for months. If stock is wanted, one or two flower-heads may be left to mature seeds, seedlings growing very rapidly and producing stronger flowering plants than can be secured by divided old ones.

Sweet Peas.—Failure to bloom has been the general complaint this year, and it may be worth

while to consider the advisability of depending for effect on the grandiflora section, which has been fairly floriferous, notwithstanding the unsuitable weather. Seeds for strong flowering plants may be sown at once, care being taken to cover the pots with something that will prevent mice reaching the seeds.

The Plant-Houses.

Chrysanthemums.—The whole of those yet out should be transferred to empty structures during the incoming week. They may be effectively grouped in colours, but must not be stood too closely together, otherwise mildew will cause the leaves to drop. Give abundance of air in the meantime, closing only in the case of frost. The amount of water must be apportioned to their changed conditions; but overwatering, it should be remembered, though apparently innocuous, has an evil effect on the keeping of the blooms when cut. Clear manure-water and very slight applications of sulphate of ammonia are valuable colouring agents.

Bulbs for Pots.—The remainder may now be placed in pots. Usually they comprise only early Tulips and Hyacinths, but Darwin Tulips and Parrot Tulips and a selection of early Gladioli, e.g., The Bride and Ackermannii for cutting, and early Spanish Iris, such as Belle Chinoise, are also well worth growing. Store the filled pots in a protected position out of doors and cover with cinders or Cocoa-nut refuse. As a rule they will be ready for removal about the New Year.

Late Asters.—In the majority of gardens late Asters will not bloom if left out. The flowers are so valuable that at least a selection should be lifted and placed in pots or boxes, to be stood in any cool structure till the flowers are over. Once fresh roots push, they do not resent being in a warm greenhouse, but the colours are not so fresh as when expansion takes place in a perfectly cool place.

The Vegetable Garden.

Onions.—These will now be well enough ripened to store for the winter. Frost does not seem to harm the bulbs; but dryness, with fresh air, is essential to hinder them from pushing shoots and roots. I grow the largest proportion of James' Keeping, which is easier to ripen than very large sorts, and therefore keeps better.

Beet.—The crop may now be carefully lifted, the leaves twisted off and the roots stored away in sand in a frost-proof outhouse, or else clamped like Potatoes, with plenty of dry straw between the roots and the upper layer of soil. Dig or trench the ground after it is cleared, burying the leaves in the process.

Lettuces.—It is time to transfer plants not too forward from the open to frames for winter use. Sowing after sowing failed in August, and unless some were sown in frames or boxes, there will be a scarcity. Much may be effected by sowing in cutting-boxes at intervals and using the tender leaves when large enough. All the Year Round is one of the best for this purpose.

Cauliflowers.—There is often a glut at this time of the year, but the heads can be kept for some time if the plants are drawn and hung up in a very cool place. It is important, too, to protect those not lifted with a large leaf, which keeps them from losing colour and being damaged by bad weather.

The Hardy Fruit Garden.

Fruit-gathering.—All except the very latest Apples and Pears may be picked within the next ten days. King of the Pippins, Ribston Pippin and others that come on by degrees should be looked over twice or thrice weekly, and such Pears as Marie Louise, Emile d'Heyst and others that mature in the same way should be similarly managed. The fruit is not only finer flavoured, but the season of each is considerably extended when the gatherings are many.

Trees on Grass.—Grass has been so luxuriant that some of it has been mown two and three times. It should now be mown for the last time, when the orchard will be tidy for some months on end, except when the falling leaves make a litter. The finest fruit and the healthiest trees generally grow here on ground sown down with grass. It has the advantage of producing two crops, one of bulbous flowers and the other of fruit, and is easier to keep even in such an exceptional year as the present than bare soil.

R. P. BROTHERSTON,
Tynningham, Prestonkirk, N.B.

NURSERY NOTES.

THE WARGRAVE PLANT FARM.

SUCH is the style and title of an entirely new plant nursery which, during the past year, has sprung into being in the clear, open and pure country atmosphere between Twyford and Henley. Its immediate position is on the main Bath Road, a mile or so from the Twyford and Wargrave Stations (Great Western Railway); while to the pedestrian or motorist from the Reading side it is presented to view on slightly-elevated ground at a right-angled turn half a mile or more ahead, about midway between the places named. Hence, at the outset, there has been no idea of "hiding the light under a bushel"; rather has there been a studied and businesslike attempt to reveal its whereabouts to all whom it may concern.

This, then, is the brief introduction we present to our readers of the new-comer, though an equally important obligation remains, viz., to introduce its promoter and proprietor, who is Mr. Bernard Crisp, a son of Sir Frank Crisp of Friar Park, Henley-on-Thames. In this solitary fact prestige and importance participate, the former of a purely personal nature, the latter because this particular beginner's experiences have been founded upon a rock—that at Friar Park to wit—and not been built upon the sand. Schooled in such a university, it is little wonder that Mr. Bernard Crisp has invested this new venture of his—a realisation of the dream of years—with a knowledge and enthusiasm which are of considerable rarity, and which will doubtless stand him in good stead as the years go by. Already there are some six acres of recent pasture-land within the enclosure, with opportunities for liberal extension. The plants already installed in the nursery beds—and they exist in their thousands—evidence unusual vigour and freedom, and there appears little room for doubt that the vast majority of plants such a nursery should contain will presently find here a highly-congenial home.

Flanking right and left within the crescent-formed entrance are broad stretches of *Nepeta Mussini*, a highly-attractive plant with bluish violet flowers. From this point spacious herbaceous borders prevail, acting as conductors to what is beyond. In these, for the most part, many goodly examples are to be seen, *Heleniums*, *Polygonums*, *Kniphofias*, *Sunflowers*, *Michaelmas Daisies* and similar kinds, and adjacent thereto collections or selections of these and other plants galore, the aim of the moment being to get together, test, and presently retain the fittest of each. In order to carry this into effect, much space is devoted to *Flag* and other *Irises*, to *Phloxes* of the *decussata* or herbaceous set, to *Michaelmas Daisies*, and, in turn, to all other large classes of plants. What appealed to us most strongly, however, was the great range and variety of alpiners in plunging-bed or frame—they were present in their battalions, and the nursery is obviously destined to be a veritable emporium for such things. Nor were the plants mere fragments of their kind; on the contrary, they surprised us by their representative character and good and sensible size, such, indeed, as are calculated to endure and to conform to the guarantee which the published catalogue gives concerning them. Obviously such a collection and such plants are not the work of a day, and obviously, too, Mr. Crisp gardened with these things in days before the nursery began.

Amid thin, sheltering hedges of Beech and in prepared soil we got quickly into touch with the choicer subjects, and here in their hundreds were many plants being raised from seeds. Of these, quite a revelation was a batch of *Primula capitata* in full flower within ten months of the sowing. The variety, too, was a particularly good and rich-coloured one, taller—12 inches to 15 inches for the most part—and perhaps a trifle more frail of stem than is the typical kind usually. The fine, free mass of it in early September days was most welcome, and rock gardeners and others who require this good plant at that time should make a note of it straight away. *P. bulleyana*, *P. littoniana*, *P. frondosa*, *P. Forrestii*, *P. denticulata* and its varieties *cashmeriana*, with *P. rosea* and many more, were all here upon the same plan, though not affording the conspicuous flowering of that first named. *Gentians*, too, are being raised from seeds, with more or less success, also the best of the alpine *Anemones*, such as *A. alpina*, *A. sulphurea*, *A. Pulsatilla*, *A. P. alba* and others. These latter are here in endless numbers, the seedlings constituting a veritable sward upon the ground. They are destined for further trial, however, the white form more particularly to ensure nothing but the best stock being distributed, a principle to which considerable importance is attached.

In these same shelters—veritable nurseries for the choicest children of garden and mountain—we came upon a capital grouping of *White Star Campanula*, whose white, salver-shaped flowers are 2 inches across on plants not more than eight inches high. It is a great beauty, and full of flower. The *Worm Grass (Spigelia marilandica)*, in crimson and gold; *Anemone sylvestris grandiflora flore pleno*, that inimitable carpeting alpine; *Linnaea borealis canadense*, whose exquisite drooping flowers of rose pink and white dangling as tiny bells from frail 3-inch-high stems beckon by their perfume alone; with *Soldanellas*, *Pratias*, *Spiraea digitata nana*, pink-flowered; *Lobelia radicans*, whose violet flowers have yellow spots and a white throat; *Wahlenbergia serpyllifolia major*, *Myosotis rupicola*, the true alpine *Forget-me-not*; and the rarely-seen *New Holland Violet (Erpetion reniforme)* were all here worthy representatives of their kind. Quite interesting and beautiful and new to us, as we believe it is to commerce, was the grey-leaved, yellow-flowered *Alyssum moellendorffianum*. It is of prostrate habit, late-flowering, and therefore valuable.

Quite naturally, in its more popular sections the genus *Saxifraga* predominates, and scores of the best, with choicer kinds in the hands of the propagator elsewhere, are sufficient for all purposes, sufficient to enthuse the visitor of their worth, their endless variety and their charm, and all-sufficient for those who garden with the best of them in alpine house or rock garden. Quite one of the more notable features of the nursery, however, are the rich collections of grey or silver leaved plants that crop up in all directions, whole groups of silvery *Artemisias*, *Achilleas*, and, in lesser degree, *Teucrium*, *Veronica*, *Pyrethrum* and *Senecio* occurring among the rest. An invaluable plant in this connection is *Santolium incana nana*, which in its cushioned tufts is quite unique. The pretty, ever-flowering *Erodiums*, silvery and otherwise, are here too, while such unique subjects as *Euonymus radicans kewensis*, *Pelargonium endlicherianum* and *Polygonum vaccinifolium* are receiving the attention they merit. Among choice shrubs, *Carpenteria californica*, *Fremontia californica* and *Fabiana*

imbricata were noted in quantity; while extensive accommodation exists for the best *Water Lilies*, which are already installed in considerable force. In short, it is a nursery destined to meet the requirements of all interested in hardy plant gardening, be the direction what it may.

The shop and offices of the firm are situated at 10, The Arcade, Liverpool Street, London, E.C., where exhibits of seasonable flowers are to be seen daily. Bulbs of all kinds are also well displayed just now, and purchasers can rest assured that every endeavour will be made to give satisfaction.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PRIMROSE PLANTS FOR INSPECTION (I. Barron).—The plants are not affected by any disease, but appear to us to have been left too long in the same place. The stem of most *Primroses* elongates, and new roots are annually produced just below the leaf rosettes. It is important that the plants should be placed in such a position that they may push their roots into the soil as quickly as possible.

HERBACEOUS PLANTS FOR SANDY SOIL (J. H.).—Providing your ground has been fairly well manured, you ought not to find any difficulty in growing a general collection of herbaceous plants. The following subjects will act as a guide to the kinds of plants to choose: *Delphiniums* in variety, *Phlox* in variety, *Sunflowers*, *Asters*, *Salvia nervosa*, *Lychnis chalcidonica*, *Monarda didyma*, *Gypsophila paniculata*, *Galega officinalis*, *Pentstemon*, *Snappedragons*, *Lilium candidum*, *Papaver orientale*, *Veronics* in variety, *Campanula persicifolia*, *Saxifraga cordifolia*, *Statice Limonium*, *Hollyhocks*, *German Irises*, *Saponaria officinalis flore pleno* and *Chrysanthemum maximum* varieties.

LAYING OUT A GARDEN (Rock).—We endeavour to assist our readers as far as is possible with advice and other matters, but giving garden designs—which, as a rule, would only suit individual cases—is beyond our scope. Your letter has two references to a pond, though your sketch merely shows a ditch 2 feet wide and 1 foot deep. If this shallow ditch is habitually water charged, it would affect the surrounding land, and of necessity the planting would have to be consistent therewith. In such cases much hangs on a very little, and we think your better course would be to send us a more complete sketch of the ground, indicate the position of the pond, and give fuller particulars as to the ditch and general surroundings. We may then be able to assist you.

HERBACEOUS PLANTS FAILING (F. A.).—Doubtless in every garden, or locality, you would find a few instances of plants not doing quite so well as the majority. Those not having grown luxuriously in your present garden are instances in point, and may be accounted for thus. The *Anemone* prefers a rather shaded spot and deep sandy loam. *Snappedragons* are most happy in light sandy, or stony, and poor soils. The *Flags*—*Irises* we presume you mean—are usually content in light or heavy soils, if away from trees and no wireworm is present in the soil. The *Epimedium* is a lover of sandy peat and loam and a cool-rooting medium. This plant is also at home in light loamy soils and shade. *Montbretias* prefer rich loamy soils, and are best when annually lifted and rested, taking them up in October and replanting singly in well-prepared ground in March or April. Success, however, has not to do with soils alone, and often the planting or the planter is at fault. For example, *Irises* or *Paeonies* are often planted in big clumps intact, when they should be divided freely. In the case of the *Iris*, 4 inches or 5 inches of the current year's rhizome (rootstock) and the growth is ample, all back sections of the rhizome being useless. By planting half-a-dozen or a dozen of these a few inches asunder, a good group would be formed, and the principle is worthy

of general adoption. Take care that you work the soil of your new garden as deeply as possible, and add light road sweepings and manure freely to improve the staple.

EREMURUS FAILING (*A. M., Ambleside*).—If you are sure that wireworm is not at the root of the trouble, it is highly probable that some ground fungus may be at work. In the seedling stage, and in frames, not a few things damp off wholesale; but we presume your plants have long since passed that stage. In all the circumstances, we are inclined to regard the trouble as of a fungoid nature and one which, in all probability, will be best remedied by a slight application of lime to the soil and to the parts affected. Are you sure that the plants are buried deep enough in the earth? since the Eremuri build their crowns one above the other, and so presently lift themselves out of the soil, and the roots emerging from the base of the crowns get out of touch with support. So many things that predispose to failure are frequently overlooked or unknown. If, on further observation, the fungus theory is supported, your better plan will be to lift and replant them in a fresh site in early October. The crowns should then be thoroughly cleansed by washing.

TREES AND SHRUBS.

PRIVET HEDGE (*Dolphin*).—You had better leave your Privet hedge alone until next spring as regards severe pruning, then you may cut it back as severely as you like. April is a good time. The Willow hedge you mention may be pruned at once if you wish.

BIRCH LEAVES (*X.*).—There is no fungus present to account for the dying of the Birch foliage. It is possible that the trouble is due, as you suggest, to the roots getting into too wet a substratum. A water-logged soil causes suffocation of the roots, and this reduces the amount of the supply of water to the foliage. The water supply might well be sufficient for the demand when the leaves first expand, and prove insufficient when they had reached a greater size and increased in number. 2. The Pears are attacked by the fungus *Fusicladium pyrium*. Adopt the measures we recommend in reply to "J. S." on this page. 3. As to the non-fruiting of the trees, is it certain that the pruning is carried out on the right lines?

SHRUBS FOR BANK FACING WEST (*J. H.*).—The following kinds are likely to prove satisfactory in the position you describe. All may be kept to within 4 feet or 5 feet in height: *Escallonia philippiana*, *Daphne Mezereum*, *Prunus japonica flore pleno*, *P. nana*, *Philadelphus Lemoinei* and variety *erectus*, *P. microphyllus*, *Olearia macrodonta*, *Cotoneaster thymifolia*, *C. horizontalis*, *Spiraea japonica* and variety *Anthony Waterer*, *Tree Ivies* in variety, *Tamarix pentandra*, *Berberis Aquifolium*, *Hypericum patulum* variety *Heeryi*, *H. moserianum*, *H. calycinum*, *H. androsarum*, *Cistus monspeliensis*, *C. ladaniferus*, *C. villosus*, *Helianthemum fornosum*, *Diervilla Eva Rathke*, *Phillyrea decora*, *Erica vagans*, *E. mediterranea* and variety *hybrida*, *Daboecia polifolia*, *Cytisus praecox*, *C. scoparius sulphureus*, *C. purpureus*, *Olearia Haastii*, *Genista hispanica* and any of the autumn-flowering *Ceanothuses*. The border should be trenched before planting.

ROSE GARDEN.

ROSES AND PEATY SOIL (*Rev. C. G. O. B.*).—We thank you for your letter re Mrs. Edward Mawley, and it is most interesting to learn from you that you have been so successful in the culture of this Rose. Undoubtedly many Tea and Hybrid Tea Roses revel in a peaty soil, providing they are well supplied with liquids in the growing season. Laurent Carle is a fine Rose in any soil, and we are glad you have found it good in your light soil. As regards Mile. Jeanne Philippe, this Rose is not nearly so much grown as it should be. It is a beautiful colour and a good grower. It was raised by Godard and sent out in 1899.

ROSE FOLIAGE BLIGHTED (*E. B.*).—We do not think any pest has attacked the foliage; but the shrivelled appearance is either due to cold, frosty winds, or the plants have been sprayed with some insecticide that has been too strong for them. American Pillar is evidently a hybrid between the multifloras and wichuraianas, for it possesses the glossy foliage of the latter and also some of its creeping tendencies. It is a grand climber, and its flowering period is early July in an ordinary year. The best blush rambler to flower with Hiawatha and Dorothy Perkins is Lady Godiva. Simplicity is a very good bedding Rose, but not quite so free in flowering as Irish Beauty.

SELECTION OF ROSES (*E. H. R.*).—A good dark red to grow as a standard would be Chateau de Clos Vougeot. For a reddish yellow you could not do better than select Duchess of Wellington. For a pale pink sort with pointed buds, Pharisar should please you, and a good white would be Mrs. Herbert Stevens. Comparing the value of Frau Karl Bruschki with Molly Sharma Crawford for garden decoration, we should certainly favour the former, as it produces its blooms erect. Although it is such a strong grower this, however, may be overcome by transplanting the bushes each year and pruning back rather hard. Molly Sharma Crawford is a very fine white, but has a tendency to droop.

PREPARING ROSE-BEDS (*P. J. Wood*).—We think your plan of procedure will be in the main quite all right; but instead of giving one-fourth of spent Hops to the surface, we would advise a dressing of gritty material, such as road scrapings from gravel roads, or better still, some burnt clay. The best plan to adopt to give the soil lime would be to apply it in the form of chalk at the rate of about two pounds per square yard. The chalk should be broken up into fairly small lumps. If you added some

as you trenched the soil, this would also be an advantage. We presume you intend to add some good farmyard manure to the lower soil as you trench it. This we consider very essential; and as you plant each Rose we would advise giving a handful of bone-flour just before filling in the top soil.

EXHIBITION ROSES FOR MANUFACTURING TOWN (*Exhibit*).—Unless you grow the Roses for the spring shows, we fear you would find it difficult to produce Roses under glass for the summer exhibitions. We advise you to plant the Roses outdoors, and then to erect over them a temporary structure of wood, upon which you could put light waterproof canvas to ward off excessive rains. The plants could then receive plenty of air, which they require, and you would have them more under control against the weather vagaries. You could still grow them in pots if you wish, but the pots should be plunged in soil up to the rim. There must, however, be no glass covering, or, if you do have this, let the sides and ends of the structure be open, that is, assuming you want to grow for the summer shows. Twenty-five good show kinds for your purpose would be Captain Hayward, Caroline Testout, Florence Pemberton, Frau Karl Bruschki, Hugh Dickson, Lady Ashdown, Melaine Soupert, Marquise Litta, Mrs. John Laing, Mrs. T. Roosevelt, Suzanne M. Rodocanachi, Ulrich Bruner, Countess of Shaftesbury, Dr. O'Donel Browne, George C. Waud, Gladys Harkness, Gloire de C. Guinoisseau, John Cuff, Jonkheer J. L. Mock, Lady A. Stanley, Lady Greenall, Mabel Drew, Mme. Maurice de Luze, Margaret and Mrs. A. E. Coxhead.

FRUIT GARDEN.

SPUR-PRUNING PEACH TREE SHOOTS (*Y. Z.*).—Pinch to within two leaves of the base all present growths, and subsequent ones also, the idea being to strengthen the basal buds of the shoots and compel the formation of fruit-buds.

GRAPES INFESTED WITH MEALY BUG (*J. W.*).—The only safe thing you can do to rid your Grapes of the pest is to syringe each bunch with clean rain-water. You will require to use considerable force in syringing to dislodge the whole. By using clean rain-water there will be no sediment left on the Grapes and no harm done, as they will be fit for dessert as soon as dry.

BOOK ON FRUIT GROWING (*E. G.*).—You cannot do better than order a copy of "Fruit Growing for Beginners," which will be published from this office in the course of a week or two. The price is 1s. net. It deals in a simple manner with the cultivation of all kinds of hardy fruit, and you will find the numerous illustrations very helpful.

PEARS (*J. S.*).—The Pears owe their roughness and splitting to the attack of the Pear scab fungus, *Fusicladium pyrium*. The leaves are also attacked and are being devoured by caterpillars. The best treatment for the former evil is to spray with Bordeaux mixture as soon as the petals drop, and for the latter with lead arsenate. Woolly aphid rarely attacks Pears. Some local condition must be at the root of the trouble with the Pears, causing their fall. Is the water supply all right? Trees on walls sometimes suffer badly from dryness at the root, although the rainfall may be copious.

MISCELLANEOUS.

WEED-KILLER (*Puffin*).—All the concentrated weed-killers of our acquaintance are of a distinctly poisonous nature, alike to plant and animal life.

NAMES OF PLANTS.—*T. W. C., Taunton*.—1, *Aster Linosyris*; 2, *Antirrhinum Orotinum*; 3, *Veronica speciosa* variety *Eclatante*; 4, *Lathyrus* species.—*G. B., Dorset*.—*Tamarix gallica*.—*Lionel Ward*.—*Anelhusa sempervirens*.—*Ignoramus*.—1, *Sedum Ewersii*; 2, form of *Viola munbyana*; 3, *Dianthus Carthusianorum*; 4, *Astrantia major*; 5, *Campanula gargarica*; 6, a fungus (not in condition for identification); 7, *Fuchsia Miss Lucy Finnis*. If by Sun Roses *Cistus* is meant, they may be propagated by cuttings in the autumn, but seedlings always make the best plants.—*R. M.*—*Hypericum humifusum*.—*A. Midgley*.—1, *Tropaeolum speciosum*; 2, *Sedum album*; 3, *S. reflexum*.—*F. W. Thompson*.—1, *Coronopsis* species, cannot name without flowers; 2, *Lamium purpureum* (?); 3, *Sonchus oleraceus* (Sow Thistle); 4, *Solidago virgaurea* (Golden Rod); 5, *Lapsana communis*; 6, *Hibiscus sylvicus*; 7, *Hesperis matronalis* (Dame's Violet); 8, *Iberis umbellata* (Candytuft); 9, *Linaria bipartita*; 10, *Petunia*, garden variety; 11, *Oenothera amœna*; 12, *Saponaria calabrica*.

NAMES OF FRUIT.—*R. J. G. Read*.—*Souvenir du Congrès*.—*J. Corry, Dumfries*.—Apple Yorkshire Beauty.—*E. F. B., Eye*.—1, *Louise Borne* of Jersey, dessert, October; 2, *Dovené du Comice*, dessert, November and December. —*Captain M. B.*—*Pennington Seedling*.—*Fig*.—Pears: 1, *Nouvelle Fulvie*; 2, *Vicar of Winkfield*.—*Colonel D. Guernsey*.—Apple Marsel and Pear Emile d'Heyst. —*A. C. C.*—1, *Vicar of Winkfield*; 2, *Bergamotte E-peren*; 3, *St. Luke*; 4, *General Todleben*; 5, *Beurré Superfin*; 6, *Beurré Balthé Père*.—*Constant Reader*.—1, *Court Pendu Plat*; 2 and 4, *Old Hawthornden*; 3, *Braddick's Nonpareil*; 5, *Cox's Pomona*; 6, *The Queen*. Yes; send some each week. —*S. W., Westgate*.—1, *Beurré Superfin*; 2, *Emile d'Heyst*; 3, *Lane's Prince Albert*.—*Captain C. E. K.*—1, *Leathercat Russet*; 2, *Hambleton deux Ans*; 3, *Vicar of Winkfield*.—*W. B., Reading*.—1, *Beurré Clairgeau*; 2, *Beurré Hardy*; 3, *Mère du Ménage*; 4, *Lord Derby*.—*L. H.*—All the numbers were detached and mixed. It is a very unsatisfactory way of sending fruit with the numbers attached by pins.—*E. H., Sudbury*.—We think the Grape is Foster's Seedling, but the fruits were almost a mass of pulp when they reached us, so that it is impossible to say with certainty. Grapes should always be packed carefully.

SOCIETIES.

READING GARDENERS' ASSOCIATION.

The first meeting of this vigorous society for the autumn session took place in the Abbey Hall (kindly lent by Messrs. Sutton and Sons) on Monday, September 23, when Mr. F. G. Drew (chairman of committee) presided over a large assembly of members. The lecturer for the evening was Mr. W. Camm of The Gardens, Cliveden, Taplow. Mr. Camm's subject was "Common-sense in the Cultivation of the Apple," and in his opening remarks said that his system, or, as some might think it, lack of system in the cultivation of the Apple, because based on common-sense, was adopted by him some years ago when taking his first complete charge at Battle. He pointed out that the rule-of-thumb method of pruning lateral shoots to the orthodox two eyes had to give way to a system the practice of which was based on the natural habit of the tree, its method of fruit-bud production and its general environment. Before it was possible to decide as to the best system to apply to any particular tree, these points had to be observed. Mr. Camm exhibited shoots of different varieties of Apples, showing how in some varieties fruit-buds were produced freely on the current year's wood in a manner resembling the Peach; with others fruit-buds were formed chiefly on short, stubby spurs along the sides of the unshortened shoots of the previous year. He pointed out how any material cutting back of these shoots induced growth instead of fruit-bud formation. Shoots of other kinds typical of a number of our best Apples were also shown, where the fruit-buds were largely produced at the termination of short lateral growths. Any shortening of these removed the greater part of the crop. He was careful to point out that his method of pruning and thinning applied to developed trees, and not to trees in the adolescent stage, whose chief business it was to grow—not to produce fruit—with which more severe methods of pruning were necessary in order to form a framework on which the fruiting wood was to be borne. A question with reference to summer pruning elicited the answer that the lecturer had neither time for it nor any faith in the practice. It might answer a useful purpose on young trees in a warm, dry soil. On older trees and heavy land it was generally detrimental. A very pretty collection of single Dahlias (from seed) was staged by Mr. H. C. Loader, The Gardens, Erleigh Park, who also exhibited vases of magnificent Asters Sutton's Shell Pink. Ten new members were elected.

THE EDITOR'S TABLE.

A New Moræa from Messrs. Barr and Sons.—Messrs. Barr and Sons of King Street, Covent Garden, send flowers of a beautiful and interesting new Moræa, a flower resembling in form the Spanish Irises. Messrs. Barr write: "We think you will be interested in seeing the beautiful Moræa iridioides Johnsonii, of which we send you specimens herewith. The flowers have opened with us in our office, and differ considerably from *M. iridioides* in being larger, more solid and lasting much longer. In the case of *M. iridioides* the flowers are more fugitive. We have now had these flowers in our possession three or four days. This Moræa was obtained by Mrs. Richmond from Ceylon, where it was imported from South Africa some years ago, and has considerably improved under the Ceylon climate."

Addresses of Gardeners Wanted.—The Editor of the *Horticultural Directory*, 10, Essex Street, Strand, London, W.C., will be glad if head-gardeners will notify him of any change of proprietorship or address since last October.

Another Cup for Rock Plants.—The Council of the Royal Horticultural Society offer at their show on March 4 and 5, 1913 (subject to the general rules of the society and the special regulations indicated below), a silver cup, presented to them by Messrs. R. Wallace and Co., for the best exhibit by an amateur of alpine plants, including suitable bulbs and dwarf shrubs, in a space not exceeding 5 feet by 3 feet. The use of stone is not absolutely necessary, but the judges will be instructed to favour its correct use and the natural arrangement of the plants in connection therewith. The plants may be either in pots or lifted.

THE GARDEN.

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OCTOBER 12, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The Double White-flowered Colchicum.—

This is still a rare plant, if it has not been always so in greater or less degree. Indeed, no great quantity is ever to be seen at one time, and the plant is quite alone among its fellows. The flowers are not entirely pure white, though the occasional tinge of flesh colour seen in the early days of their opening do not rob it of any of its value.

Albino Forms of Geranium robertianum.—

At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. Bowles showed the two albino forms of *Geranium robertianum*, one with a red stem, the other with a green, which have maintained themselves for a long time in his garden. Almost all the plants of the latter form appear to be traceable to one or two sources, and the committee would be glad to hear of its occurrence in a wild state.

National Vegetable Society's Show.—

This show, held at Watford on Wednesday of last week, and a report of which appears on another page, was the best the society has held, and we are glad to know that it was visited in the evening by a large number of people. As the Earl of Clarendon stated when opening the show, few are aware of the high state to which the cultivation of vegetables has been brought in this country. That an exhibit of vegetables can be made attractive was well demonstrated by Mr. E. Beckett, V.M.H., who surpassed all his previous efforts with an exceedingly beautiful and comprehensive collection.

Adonis amurensis.—

We remind those who are desirous of making their sheltered rock gardens as attractive at as early a season as possible of the merits of *Adonis amurensis*. It frequently flowers with the Snowdrops, and has bright golden flowers with all the beauty of the Spring *Adonis*. One may sometimes have it in bloom in January, and its bright flowers are most acceptable in the sunnier, though few, winter days. It is at its best in February in Northern gardens. *A. amurensis* has several varieties, such as the double one and one with a green centre, but none is more desirable than the typical *A. amurensis*. It may still be planted with success.

A Beautiful Autumn Shrub.—

Disanthus cercidifolia is a native of Japan, and is a close ally of the *Hamamelis*, or *Witch Hazels*, though belonging botanically to an entirely different family. The growth and foliage are rather suggestive of a bush of the *Judas Tree* (*Cercis Siliquastrum*). It is a slender-growing, spreading shrub, reaching in its native country to a height of 8 feet to 10 feet. The cordate leaves are about three inches across, bluish green in summer and distinctly glaucous beneath. It is in autumn when the bushes are most attractive. They then assume a bronzy red

tint, which before the leaves fall changes to rich claret red.

A Beautiful Autumn Bed.—One of the most pleasing beds that we have seen this autumn was a large one filled with the golden-flowered *Calceolaria amplexicaulis*, with a groundwork and broad edging of *Mesembryanthemum cordifolium variegatum*. The pale yellow foliage of this low-growing plant contrasted well with the brilliant yellow flowers of the tall *Calceolarias*. Such a bed would, of course, be beautiful nearly the whole summer, but its fresh and pleasing appearance in the first week in October specially commended it.

The Snowy Mespilus Against Conifers.—When visiting the gardens at Aldenham House, Elstree, last week, we were particularly pleased with a beautiful tree of the *Snowy Mespilus*, *Amelanchier canadensis*. The foliage had taken on a brilliant red tint, and as the tree had been purposely planted in a bay of conifers, the effect was particularly good. When the tree was in flower in spring, the effect would doubtless be equally good, the sombre hue of the conifers making a fine contrast to the snowy blossoms. Those who are intending to plant trees this autumn should bear this question of contrast well in mind.

Crab Apple Veitch's Scarlet.—There are several hybrid Crabs in commerce, but the above is not so well known as its merits deserve. It was produced by crossing the Red Siberian Crab with Apple King of the Pippins, and the general characters are fairly intermediate. The fruits are highly ornamental, the skin being bright red, changing to a deep crimson on the side facing the sun. They have a somewhat pleasant flavour, and are not to be despised for culinary purposes, particularly where Crab Apple jelly is in demand. When grown as a standard, the tree produces a fine effect both in bloom and in fruit, but the best results are obtained by planting single specimens where its full beauty can be displayed.

Hollow Trees.—In most instances, says Mr. W. J. Bean in the current issue of the *Kew Bulletin*, decayed hollows in trees have their origin in snags left by branches broken off that have rotted back into the trunk because the new bark has not been able to grow over and seal up the wound. Branches removed by design, or broken off by wind or accident, should always be sawn off close to the trunk, and the sawn surface should then be coated over with ordinary coal-tar. If a snag or stump is left, the bark cannot grow over it; damp, fungoid parasites and decay sooner or later follow and gradually find their way towards and eventually into the trunk. Such is the most frequent beginning of cavities in the limbs and trunks of trees. The coating of tar renewed every two or three years makes the wound water-tight and fungus-proof, its object being to serve as a temporary bark until a new natural covering is formed.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Hardy Fuchsias.—I quite agree with your correspondent "H. P." page 486, issue September 28, respecting the use of hardy Fuchsias in the garden. They are not grown as extensively as they deserve. There are few kinds of plants more graceful in habit or more free-flowering, and few that require less attention when once planted. In town and suburban gardens, where border space is naturally restricted, Fuchsias should be grown, as they look charming in narrow beds. Some of the varieties are suitable for training on division fences intermixed with other kinds of wall plants. In the Isle of Wight and in Hampshire there are specimens to be seen trained on cottages and growing to a height of nearly twenty feet. In the Bournemouth Public Gardens there are many plants, not all of the true hardy varieties, grown in the borders and left out both winter and summer. They are cut down fairly low every year, and in the summer the branches are long and strong and bear flowers in profusion. Mr. J. B. Stevenson, the Corporation head-gardener, told me recently that he found the treatment to answer well, and the effect is certainly very charming. This district is sheltered, but to my knowledge the Fuchsia does remarkably well in the open borders well up in the Midlands.—G. G.

The Best Apples.—When reading through the article on "The Best Apples and How to Grow Them" in THE GARDEN for September 28, page 491, I was, in my ignorance, rather surprised to find the writer using the word or term "Reinette" to locate a certain type of Apple. Representatives of this class were given as King of Pippins, Cox's Orange Pippin, Russets, Blenheim Orange and Ribston Pippin. Until reading the above-mentioned article I had looked upon the word Reinette as meaning nothing definite as regards the Apple itself, but as being used only to make a name. My source of information is Dr. Hogg's Fruit Manual, and for the sake of those readers who do not see this work and to arouse friendly interest in this part of Apple nomenclature I will quote the definition of the word Reinette from the Manual: "Thomas Fuller, the eminent historian and divine, says, 'When a pepin is planted (i.e., grafted) on a pepin stock, the fruit growing thence is called a Renate.' This, I think, is the origin of the word, Reinette being derived from *Renatus*—renewed or reproduced. A Reinette is therefore a grafted Apple, and a Pippin is a seedling." I should be pleased to see some further notes regarding this word Reinette, and to learn whether some definite rule has been formed regarding its use for classifying Apples.—A. T. C.

Roses with Bad Habits.—In an interesting note in THE GARDEN for September 21, page 474, on this important subject, I am glad to notice that "G. T. W." supports me in my endeavour to uphold General Macarthur both as a mildew-resister and as an otherwise ideal garden Rose. Curiously enough, "C. T.," on the same page, while absolving the variety from a predilection to mildew, complains of its shy-blooming qualities. Here it is one of the freest Roses in the garden, and even on September 28 there were dozens of fine blooms, besides quantities of buds in various stages, on the plants, twenty-five in number, growing in a large circular bed in the garden.

This bed is quartered with Liberty, Mme. Ravary, M. Paul Lede and General Macarthur. All have done splendidly, but the last-named by far the best. Mrs. Sharman Crawford is certainly very prone to the attacks of mildew. This season Killarney has been almost free from this trouble, and so has General Jacqueminot; but Margaret Dickson, as usual, is very badly attacked. Lyon Rose with us has but one fault—its drooping habit. It flowers abundantly, and usually gives very fine colour, but, as with others, varies in this latter respect. After reading "C. T.'s" note I closely examined Una, and can find no trace of mildew on it. It seems conclusive that climate, soil and surroundings have much to do with the behaviour of Roses in general.—C. B., *Lindilghow*.

Rock Garden Plants that Flower in Early Autumn.—*Silene Schafta* is one of the plants which should be added to the brief list given by Mr. E. H. Jenkins in his valuable and suggestive article under the above heading on page 502, issue October 5. It is simply indispensable, and



MR. EDWARD MAWLEY, V.M.H., HON. SECRETARY OF THE NATIONAL ROSE SOCIETY.

is yet in bloom in early October. *Tanica Saxifraga* and *T. olympica* are equally invaluable, and are still in bloom. *Origanum hybridum* is also in flower, and has been for a long time. It is most pleasing with its glaucous leaves and Hop-like heads of little flowers. *Anthemis cupaniana* makes a second bloom at this season, and is fine over a wall or on rockwork of some size. The old *Viola cornuta* and its several varieties are almost continuous blooming in summer and autumn. The old double *Helianthemum amabile*, commonly known as Mrs. C. Earle, is giving more or less bloom all the autumn; the little *Astrantia minor* and *gracilis* are good for autumn flower; and several of the *Erodiums*, such as *macradenum*, *pelargonifolium* and *cheilanthifolium*, are excellent. Late *Ericas* or Heaths and the forms of the common *Calluna vulgaris* are beyond praise for autumn bloom, and the *Menziesias* give flower as well. *Phuopsis* or *Crucianella stylosa*, though unpleasantly odorous at nights and in wet weather, is very useful,

and I find that *Cytisus schipkaensis* gives a succession of flowers from June until October here. *Ethionemas grandiflorum* and *persicum* still give bloom all the autumn, and *Geranium lancastricense* is rarely out of flower.—S. ARNOTT, *Dumfries*.

The Twelve Best Climbing Roses.—"G. B. W.'s" article on these in your issue of September 21, page 475, ends with the hope that his remarks on this interesting subject may call forth others. I feel that I am (or must be, in his opinion, at any rate) somewhat handicapped, inasmuch as I cannot thank heaven that I am not a rosarian, and must even plead guilty to that apparently greater sin of having once been (if I am not now) an exhibitor. Situated, therefore, as I find myself, it would be presumptuous to think that I can possibly improve on his list of the twelve best climbing Roses. I will only suggest that my list might be helpful if anyone wants more than twelve, or if he has any of those unaccountable prejudices that make or mar the taste of rosarians and exhibitors, and that will make him hesitate before ordering any one of "G. B. W.'s" dozen. Having said so much, let me hasten to congratulate "G. B. W." on his list. It is a real good dozen, but it reads a little curiously having regard to his conditions. They were (1) fragrance and (2) continuity of bloom. Six out of the twelve fail to pass the first test, and four out of the twelve fail with regard to the second. It is possible to compile a list of twelve climbing Roses that will have fragrance and continuity of bloom—that is to say, will flower more than once; but they might be found to fail in another requisite of a climbing Rose, namely, vigour. *Lina Schmidt Michel*, *Johanna Sebus* and *Trier* are cases in point. They are all in flower with me as I write, and are fragrant, particularly *Johanna Sebus*, which has a fragrance that few Roses can equal; but they are pillar Roses, and will not, as a rule, exceed 10 feet, *Trier* even less than that. Warned by "G. B. W.'s" example, I will not set down definitions or "characteristics" that the Roses cannot comply with, neither will I endeavour to place them in order of merit—that savours too much of the exhibition; but just in plain alphabetical order I submit the names of twelve climbing Roses: *American Pillar*, *Ard's Rover*, *Blush Rambler*, *Climbing Caroline Testout*, *Climbing Souvenir de Pierre Notting*, *Evangeline*, *Hjawatha*, *Lady Godiva*, *Mme. Alfred Carrière*, *Sarah Bernhardt*, *Tausendschön* and *Tea Rambler*. Of this list five will be found in "G. B. W.'s" selection, so nothing further need be said of them. Of the remaining seven two are new Roses, but I can recommend both of them. *Sarah Bernhardt* I have known for three years, and the more I see of it the better I like it. I have had three distinct crops on my plants this year. It is undoubtedly the best climber of its colour—a scarlet crimson that does not blue with age. The climbing sport of *Souvenir de Pierre Notting* speaks for itself. I doubt if there is a freer-flowering yellow than the type, and the sport seems to give us both larger and better flowers, and promises to be a good grower. On the ground of fragrance and continuous flowering, and I think I may add vigour of growth, I suggest List 1 beats List 2 in nearly every case; but, after all, I do not for one moment expect "G. B. W." to think so—*De gustibus non disputandum*—and he has a perfect right to his opinion. I should be much obliged to him if he will tell me where I can get *Marie Bret*, his No. 3, and what he thinks of my suggestions.—HERBERT E. MOLYNEUX.

Rose Psyche as a Pillar variety.—This Rose is a good example of a pillar Rose as distinct from a rambler Rose. It does not make long, rampant growths, as ramblers usually do, but will clothe a pillar splendidly up to 7 feet or 8 feet, the latter being the height of the support shown in the illustration. It is a vigorous Rose, with clean, glossy foliage and pale rosy pink flowers. A strong point in its favour is its ability to withstand mildew.—C. T., *Highgate*.

A Giant Groundsel.—Of several species of *Senecio* introduced from China during the present century, the one named *Senecio Clivorum* is the most popular. Being unusually vigorous and quite a giant in growth, it is not suitable for a small border. Rather should *S. Clivorum* be planted in the pleasure grounds, in masses by the lakeside, and in open places by the side of woodland walks. Wherever planted, good cultivation is necessary to obtain the plants in true character. The soil must be deep, moist and rich. Such conditions will result in *Senecio Clivorum* with inflorescences 4 feet in height and a mass of striking, heart-shaped leaves, each one exceeding a foot across. The flowers are golden yellow in colour, the flowering season August and September. When growing under favourable conditions the seeds fall, and by spring there are crowds of small plants requiring attention surrounding the parent rootstocks. Division of the roots or crowns in late October or March also forms a ready means of propagation.—A. O.

Greenhouse Plants for Winter Flowers.—Now and during the next few weeks is the time when one has to consider what to pot for flowering during winter or early spring. *Schizanthus* is one of the prettiest plants, of most elegant growth, and no plant is better adapted for a cool or intermediate greenhouse. Potted now into 5-inch pots in good, rich, sandy loam, they will flower early in the year. Plants of the mixed hybrids provide quite a variety of colour, most of the flowers being copiously spotted. Two other splendid plants which flower most freely and give a beautiful tone to the greenhouse and conservatory are *Primula hybrida* and the small, free-flowering variety *P. stellata*. These plants, potted into 3½-inch or 4-inch pots in a compost of three parts loam to one of well-decayed stable manure, adding a liberal supply of sand or finely-ground old mortar, will soon make fine specimens. As soon as the pots are full of roots, they should be moved on into 6-inch pots, using a similar compost to that previously mentioned.—J. L. E.

FORTHCOMING EVENTS.

October 14.—United Horticultural Benefit and Provident Society's Committee Meeting.

October 16.—North of England Horticultural Society's Meeting at Leeds. Lecture by the Rev. J. B. Hall on "Apple Culture." Wargrave and District Gardeners' Association's Meeting.

WORKERS AMONG THE FLOWERS.

MR. EDWARD MAWLEY, V.M.H.

IT would be exceedingly difficult to find in the world of horticulture, and particularly that section specially interested in Roses, a man who is more highly esteemed or more widely respected than Mr. Edward Mawley, V.M.H., the hon. secretary of the National Rose Society. For nearly forty years Mr. Mawley



ROSE PSYCHE AS A PILLAR IN A NORTH LONDON GARDEN.

has taken an active interest in the Queen of Flowers. It was at Croydon that he first commenced to grow Roses, somewhere about the year 1875 and in 1877 he became co-hon. secretary of the National Rose Society with the late Rev. H. H. D'ombrain. On the death of that esteemed rosarian in 1905 Mr. Mawley took over the full duties of hon. secretary, a position he has admirably filled ever since. From the commencement of his Rose-growing career at Croydon until he left there for Berkhamsted in 1885 he never had more than 400 plants, yet so keen was he in cultivating them

that he used to exhibit at all the National Rose Society's shows as well as at local and other exhibitions. At that time his prowess as an exhibitor, and, incidentally, the winner of first prizes, was so well known that his friends used to refer to him as the "champion of the light-weights."

When he moved to Berkhamsted, Mr. Mawley increased his collection of exhibition Roses to about two thousand bushes, and this enabled him to exhibit in larger classes with continued success.

In 1910 the National Rose Society bestowed upon him the Dean Hole Medal, which is awarded from time to time, as occasion may arise, to anyone who has rendered special service in forwarding the cultivation of the Rose.

But although Mr. Mawley has done such yeoman service for the Queen of Flowers, he has found time to enter the lists on behalf of the less universally beloved Dahlia, and, indeed, has been interested in that flower almost as long as in the Rose. For many years he acted as hon. treasurer for the National Dahlia Society, and on the death of his friend, Mr. Girdlestone, he became president of that society, a post he held until last year, when he resigned so that he could devote more time to the National Rose Society. Show Dahlias were his first favourites, but later he became more particularly interested in the Cactus section, and in recent years the single varieties have claimed his attention. He has been a most successful raiser of these, and secured certificates from the National Dahlia Society for a number of his seedlings.

In meteorological circles Mr. Mawley is almost, if not quite, as well known as he is among horticulturists. For over thirty years he was a member of the Council of the Royal Meteorological Society, for two years secretary to that Council, and on several occasions held the position of vice-president and ultimately became president, election to these positions being for two years. For over twenty years he acted as phenological recorder to the society, so that it will be readily seen that he has devoted no little time to a fascinating pursuit. His meteorological observatory, which he has maintained for nearly forty years, has always been, and still is, the best private one in the country. In 1904 the Council of the Royal Horticultural Society con-

ferred upon him the Victoria Medal of Horticulture in recognition of his services in the interests of gardening, an honour that was thoroughly deserved. As a private individual, as well as in his official capacities, Mr. Mawley is an exceedingly charming man, one who is ever ready to assist in any movement that is likely to benefit the flowers that he loves so fully, and we know that his numerous and world-wide friends will join us in the wish that he may long be spared to carry on his work, which to him, as to every enthusiast, is a labour of love.

PLANNING A ROSE GARDEN. A VISIT TO SOME IRISH ROSE GARDENS.

IN many a garden scheme it is found desirable that the Rose garden should be somewhat detached from other portions. That it should be so is not a bad general rule, because it is only for about three months in the year that it can be at its best, while the bare appearance in winter and the usual coating of manure do not make for beauty in the garden landscape. But if the Rose garden is in some retired place and fenced with a good Yew hedge, it need not be visited at a time when there is no display of bloom, and yet it has the shelter that is always desirable.

The plan shows such a garden of about a hundred feet square, with two equal divisions only separated by a wide grass path, with a central sundial. The paths are all of grass, for not only is the green of grass a better setting than the colour of gravel, but the grass is dry for walking upon during the summer months when the Roses are at their best. Four seats on paved platforms are notched into the Yew hedge, and four of the beds, two and two on either side as seen from the seats, have a central ornament on a stone-paved base. These may be ornamental vases, with tops rather than for plants, or, perhaps better, suitable figures in stone or lead.

The Roses, as shown on half the plan of the garden, are chosen so as to make a good effect of colour. On each side the four angle beds have kinds with deep red bloom, lighter coloured as to the inward facing margin. The large, outer middle beds have a main planting of the fine Zephyrine Droughin, a Rose that, well known in France, has only of late found its place in English estimation. Among garden Roses it is indispensable. Free in growth, lovely in form and rosy red colour and of sweetest scent, it is a Rose for every garden. The two beds nearest the sundial are of shades of pink, planted with Lady Ashtown and Caroline Testout, two of the best Roses for bedding purposes. The four square beds with the central ornament are of Roses nearly white, flushed and shaded with tender pink. The whole of the beds have an irregular edging, about eighteen inches wide, of *Stachys lanata*. This edging serves not only to enhance the beauty of the various red and pink colourings, but to fill empty space and to emphasise the lines of the design.

G. JERYLL.

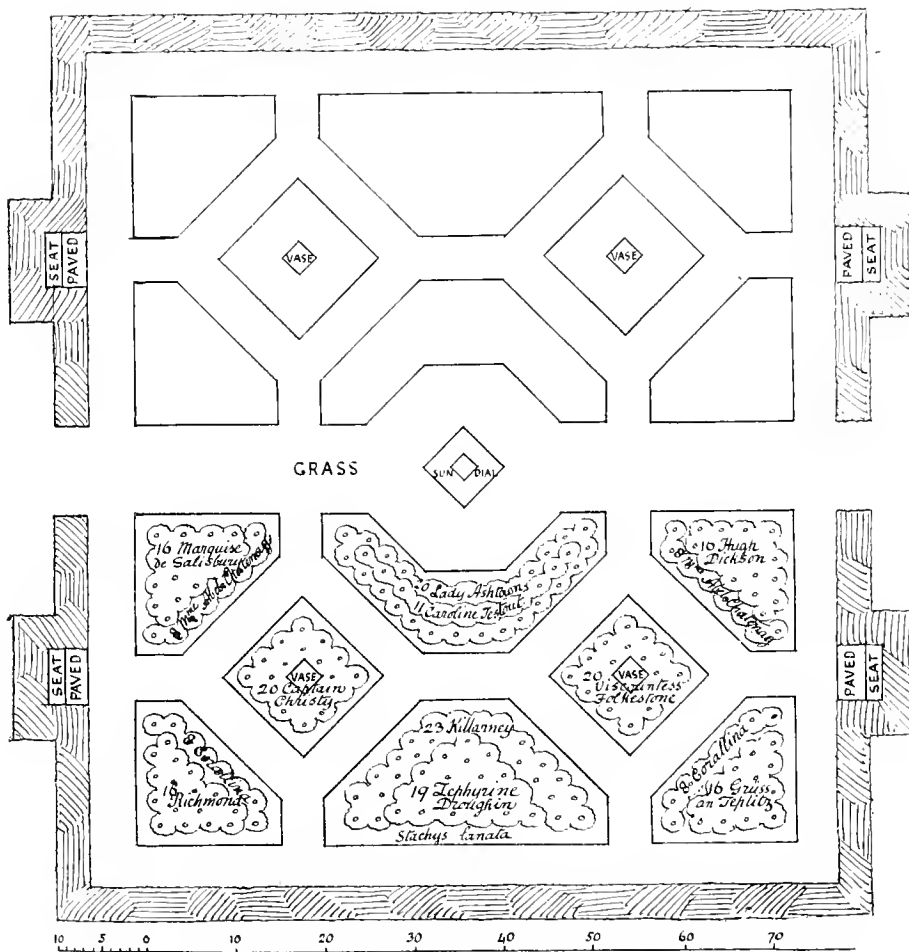
FOR the National Rose Society to hold its provincial exhibition this year at Belfast was a happy move. Being termed "National," the society must justify its claim to the title by including Ireland within its venue, and after experiencing the easiness of the journey, the cordial welcome accorded and the excellence of the management of the exhibition, one confidently anticipates that it will not be long before the National Rose Society pays its second visit to Ireland. But it was a happy move in another respect; it enabled

done more to increase the number of Hybrid Teas now under cultivation, especially the so-called "exhibition" varieties? To name but half-a-dozen—Bessie Brown, Dean Hole, Dr. O'Donel Browne, Florence Pemberton, Mildred Grant and William Shean. What would be the position of the grower of specimen blooms if he attempted to compete without having them in his collection? And added to these, the cultivator of decorative Roses, which are now so popular, would surely feel the loss of Killarney, Liberty and Betty, and the series of single Teas sent out by this firm. Therefore, in anticipation of seeing good novelties, we visited the fields of Roses at Newtownards, and we were not disappointed. Of the Roses new and already in commerce we saw many, and made a

note of the following: Mrs. Cornwallis West (1911), flowers large and globular, white ground, shaded rosy pink. The growth of the maiden plants was strong and stout, running up 4 feet to 5 feet high, with dark green, leathery foliage. Although the blooms on maiden plants were good, this variety will probably be best as a cut-back, and one thinks it will before long be among the best twenty-four. Lady Barham (1911) is another good one; coral pink, globular, growth stiff, erect, but not tall. Mabel Drew (1911).—The name, one surmises, is, in the opinion of the raiser, an indication of its merit; a back-row exhibition flower, creamy yellow. Another Rose that attracted us was Ferniehurst (1911), the colour difficult to describe, a sort of rose pink shaded copper.

But it was the seedlings and those Roses of the present year that gave us most interest, the first being George Dickson (1912), a vigorous grower as a maiden, with blooms of good shape, imbricated, an enlarged Charles Lefebvre, reminding us

of W. E. Lippiatt and Victor Hugo. H. V. Machin was another grand red, brighter and perhaps finer in flower than the previous one. The blooms were carried erect on short, stiff stems, but the habit apparently was not so vigorous as might be desired. Irish Flame, like H. V. Machin, has already been before the public, and on account of its distinctive colouring will be popular for decorative purposes. In addition to these there were some attractive seedlings of the Rayon d'Or type. But the one that in our opinion stood out above all others was Mrs. S. T. Wright, a seedling of great promise, blooms of medium size, colour deep yellow, almost orange, high-pointed centre, growth vigorous and branching.



PLAN OF A ROSE GARDEN, ARRANGED WITH A VIEW TO COLOUR EFFECT. THE TOP HALF SHOULD BE PLANTED AS INDICATED FOR THE LOWER PORTION.

the English contingent to view at the same time the three chief centres of Roses in Ireland—Messrs. Alex. Dickson and Sons of Newtownards, Messrs. Hugh Dickson of Belmont, and Messrs. S. McGredy and Son of Portadown—and the purport of this article is to give a few brief notes of a flying visit paid to each of them.

Newtownards.—Messrs. Alex. Dickson and Sons were the pioneers in the Emerald Isle in raising new Roses. This firm has so enriched our gardens with new varieties that the term "Dickson's Roses" is only another way—a shorter way—of designating the Roses distributed by them. Apart from the Rose-growers of Lyons, has any firm

Belmont.—As all Rosarians are aware, Messrs. Hugh Dickson of Belmont is another firm that has given much attention to the raising of seedling Roses. The brothers, a few years ago, made it their especial work to introduce deep red and crimson into the colour of the Hybrid Teas, J. B. Clark, Hugh Dickson and Leslie Holland being some of their results, and now we have in King George V. (1912) the darkest of all the red Hybrid Teas; colour a rich velvety crimson like Charles Lefévre, globular in shape, growth on maidens very vigorous.

But in addition to reds, this firm is producing good salmons of the Lyon Rose type. Mrs. Sam Ross (1912) is one of these. The flowers are light chamois yellow, blooms large, full and sweetly perfumed; habit free-flowering, branching, and apparently of good constitution. A characteristic of the large number of seedlings on trial is their size and depth of petal. Of those introduced to public notice, Colleen will probably be one of the largest Roses. It was exhibited at the National Rose Society's show at Belfast this year. In colour it is not unlike Rose Her Majesty, but with high-pointed centre, petals thick, very full, vigorous growth. But an even larger and finer Rose is yet to come, a magnificent lemon-coloured Frau Karl Druschki, apparently the biggest of all Roses yet raised, strong in growth and very free-flowering. Another noticeable Rose, if one's notes are correct, was Mrs. Hugh Dickson, a Pernetiana, deep, dazzling, orange red. The name is indicative of its merit. We also noted some excellent yellows of the Melanie Soupert type, and more good reds as well, several of which will prove useful to the grower of specimen blooms; and one left the inspection of the seedlings of Messrs. Hugh Dickson with the feeling that before long the size of the exhibition boxes will have to be increased.

Portadown.—Messrs. S. McGredy and Son of Portadown have given us in the past some good Roses and, to be candid, some that have not fulfilled our expectations, or, shall we say, they do not feel at home in the English climate. However, we shall always be grateful to them for providing us with two such excellent Roses as (1)

Mrs. Alfred Tate, which in one's own garden has been admired by many visitors, and even now, at the end of September, is as good as, if not better than, at the height of the season; and (2) Mrs. Arthur Coxhead, a Rose which should be in everybody's garden, one of the sweetest-scented Roses we have, perfect in shape, and always in bloom right up to late October.

Each of the three eminent Irish raisers of seedlings is good in his special line, and if we observed size and substance in the seedlings of Messrs. Hugh Dickson, we found that the seedlings of Messrs. S. McGredy and Son were apparently pre-eminent in yellow shades of colour. Some were decidedly orange. When the

break of 35,000 seedlings came into view, the effect was startling. Here were developments of the Pernetiana and Lyon Rose types that were not even dreamt of five years ago, and M. Pernet-Ducher will have to look to his laurels. The first seedling that beckoned us, and we were bound to respond, was Mrs. C. F. Pearson, orange yellow, flushed with red, a distinct and striking colour, the form like A. R. Goodwin. Another was an excellent free-flowering decorative variety named Mrs. Vanderbilt, of a lovely orange salmon shade; also Lady Mary Ward, yellow orange. The raisers have a very high opinion of Colleen, an exhibition Rose of much vigour, large bloom, pointed centre, good shape, colour soft pink. But among such a

on slender stems and very free. As we moved up and down the rows inspecting in this group several hundred plants, every flower seemed perfect in shape and without a blemish, notwithstanding the damp season, which is somewhat surprising, because, unlike Frau Karl Druschki, the petals appeared thin in texture. If it does as well elsewhere as it does at home, it will be one of the best white Roses both for exhibition and the garden.

JOSEPH H. PEMBERTON.

A NEW TEA ROSE: LITTLE DORRIT.

LITTLE DORRIT is a beautiful Tea Rose with conical-shaped blooms that have aptly been described as a mingling of nasturtium red, apricot and cream, with a deeper shade of red on the outer petals. When shown by Messrs. George Paul and Son, Cheshunt, before the National Rose Society at the autumn show this year, it created something in the nature of a mild sensation among Rose experts, and by way of expressing a high opinion of its merits it was awarded the society's silver-gilt medal. The Royal Horticultural Society have since shown their appreciation of this novelty by granting an award of merit at the meeting held on September 24. It is a pretty Rose, with shapely buds and perfect bloom, as depicted in the illustration on this page.



ROSE LITTLE DORRIT, A NEW VARIETY AWARDED A SILVER-GILT MEDAL AT THE NATIONAL ROSE SOCIETY'S AUTUMN SHOW.

THE BEST ROSES FOR BEDDING.

EACH year it is becoming more difficult to make a selection of Roses for planting in beds. Naturally, one wishes to have the best, and oftentimes rarity or novelty is no obstacle, providing the desired colour and quality are attained. Moreover, in so many large gardens there are established beds of the leading sorts, or, rather, those that were considered best at the time of planting, and when new beds are contemplated, other varieties are sought after. It is generally admitted that catalogue descriptions do not assist one to arrive at a correct estimate of the value of the numerous Roses for the special

purpose of bedding or massing, so that an independent opinion by one who has grown all the varieties here mentioned may be serviceable to those readers who contemplate forming new beds this coming planting season. The list is rather a lengthy one, as I am quite aware that there is diversity of tastes. I can recommend all the varieties as being quite excellent for bedding purposes, and most of them produce their blooms upon erect stalks, which is such a desirable attribute in a Rose.

Rose-lovers are still in quest of a good scarlet and crimson, but we are grateful for what raisers have given us, as we know full well how difficult it is to obtain one's ideal. In golden yellows we are well supplied now by the addition of Rayon d'Or

number of attractive seedlings there were two unnamed ones that took our fancy most. The first was a full, globular, large exhibition flower of vigorous growth, long footstalk, erect, colour of Lady Alice Stanley and habit of Caroline Testout. The second was a sort of cream-coloured Frau Karl Druschki, a promising seedling in every respect.

Leaving the new seedlings, we were taken to see British Queen (see illustration on page 518), a white variety that the writer has seen at Portadown for two or three seasons. Messrs. McGredy have a large batch of it, and seen in the mass as we approached it from afar the sight was lovely, a veritable snowstorm. In habit it is bushy and branching, flowers pointed, globular, produced

and when we are able to procure Mrs. George Beckwith we shall indeed have a most marvellous colour in this section, one whose flowers are several shades deeper than Rayon d'Or. By the courtesy of Mr. George Beckwith I was able to compare the two quite recently. This new-comer is of the wonderful pernetiana group, which its raiser has evolved from Soleil d'Or. I have placed the varieties as near in order of merit as I could, and have indicated by (d), (m) and (t) their habit of growth, which signifies dwarf, medium and tall, and they are grouped approximately to colour.

White.—(t) British Queen, H.T.; (t) Frau Karl Druschki, H.P.; (m) Molly Sharman Crawford, T.; (t) Mrs. Herbert Stevens, T.; and (m) Yvonne Rabier, Polyantha.

Blush and Flesh Colour.—(t) Pharisaer, H.T.; (t) La Tosca, H.T.; (m) Prince de Bulgarie, H.T.; (m) Admiral Dewey, H.T.; (m) Princesse Mertchersky, H.T.; (m) Antoine Rivoire, H.T.; (m) Augustine Guinoisseau, H.T.; (t) G. Nabonnand, T.; and (m) Viscountess Folkestone, H.T.

Cream.—(m) Entente Cordiale, (m) Mrs. Harold Brocklebank, (t) Peace, (m) Mrs. D. McKee, (m) Mrs. A. Munt, (m) Mme. Pernet-Ducher and (t) Marie van Houtte.

Pale Yellow.—(m) Souvenir de Gustave Prat, H.T.; (m) Mme. Hoste, T.; (m) Alexander Hill Gray, T.; (m) Natalie Bottner, H.T.; (m) Paula, T.; (t) Miss A. de Rothschild, T.; (m) Mme. C. Guinoisseau, T.; (t) Gustave Regis, H.T.; and (d) Sulphurea, T.

Deep Yellow, Golden and Apricot.—(m) Rayon d'Or, pernetiana; (m) Sunburst, H.T.; (m) Duchess of Wellington, H.T.; (m) Mme. Ravary, H.T.; (m) Lady Hillingdon, T.; (d) Marquise de Sinety, H.T.; (m) Melody, H.T.; (m) Lady Greenall, H.T.; (m) Mrs. A. R. Waddell, H.T.; (d) Le Progrès, H.T.; (m) James Coey, H.T.; (m) Lady Roberts, T.; and (t) Lady Downe, H.T.

Buff and Mixed Yellowish and Cinnamon Shades.—(m) Arthur R. Goodwin, pernetiana; (m) Lyons Rose, pernetiana; (m) Melanie Soupert, H.T.; (d) Mrs. Aaron Ward, H.T.; (d) Paul Ledé, H.T.; (d) Aurore, China; (m) Comtesse du Cayla, China; and (m) Queen Nab, China.

Salmon Pink.—(m) Mme. Segond Weber, H.T.; (m) Mrs. Geo. Shawyer, H.T.; (m) Joseph Hill, H.T.; (m) Mrs. Alfred Tate, H.T.; (t) Betty, H.T.; (m) Lady Pirrie, H.T.; and (m) Mrs. W. Christie Miller, H.T.

Pink.—(m) Lady Ashtown, H.T.; (m) Mme. Leon Pain, H.T.; (m) Caroline Testout, H.T.; (t) Mme. Abel Chatenay, H.T.; (m) Mrs. E. G. Hill, H.T.; (m) Grand Duc de Luxembourg, H.T.; (d) Joseph Lowe, H.T.; (m) La France, H.T.; and (d) Maman Turbat, Polyantha.

Rose.—(m) Lady Alice Stanley, H.T.; (m) Mme. Jules Grolez, H.T.; (t) Gustav Grunerwald, H.T.; (t) Laurent Carle, H.T.; (m) Rose Queen, H.T.; (t) Kronprinzessin Cecilie, H.T.; (d) Mme. Maurice de Luze, H.T.; (m) Colonel Leclerc,

H.T.; (m) André Gamon, H.T.; (m) Lady Battersea, H.T.; (t) Mrs. Harvey Thomas, H.T.; (m) Countess of Shaftesbury, H.T.; (d) Camoens, H.T.; and (d) Orleans Rose, Polyantha.

Light Red.—(m) George C. Waud, H.T.; (m) Captain Hayward, H.P.; (d) Papa Gontier, T.; and (m) General Schablikine, T.

Medium Reds and Scarlets.—(t) General Macarthur, H.T.; (m) Lieutenant Chauré, H.T.; (m) Leslie Holland, H.T.; (d) Liberty, H.T.; (m) Richmond, H.T.; (m) Ecarlate, H.T.; (d) Jessie, Polyantha; (d) Leuchtfeur, China; (m) Mrs. E. Powell, H.T.; (m) Mrs. Walter Easlea, H.T.; (m) Commander Jules Gravereaux, H.P.; (m) President Vignet, H.T.; (m) Fabvier, China; and (d) Charlotte Klemm, China.

Dark Crimson and Maroon.—(m) Edward Mawley, H.T.; (m) Château de Clos Vougeot,



THE NEW ROSE EDWARD BOHANE THAT GAINED AN AWARD OF MERIT FROM THE ROYAL HORTICULTURAL SOCIETY ON SEPTEMBER 24.

H.T.; (d) Victor Hugo, H.P.; (m) Marquise de Salisbury, H.T.; and (d) Princesse de Sagan, T.

ROSE EDWARD BOHANE.

This has been an exceptional year for new Roses of really sterling merit, and one of the best of this season's novelties is Edward Bohane, illustrated above. The Royal Horticultural Society have shown their appreciation of this variety by granting an award of merit; it was also awarded a gold medal at the Royal Lancashire Show. This novelty is being sent out by Messrs. Alex. Dickson of Newtownards, but as the stock is limited, we are asked to announce that it will not be offered to the public until 1914. It belongs to the Hybrid Tea class, and carries bold flowers of deep cherry red hue.

CLIMBING ROSES WITH LARGE BLOOMS.

IT SHOULD be one of the last to disparage the beautiful Rambler Roses that have wrought such a marvellous change over the modern Rose garden, but there is such a thing as allowing these to usurp the place of the large-flowered climbers of which our collection is so rich.

Ramblers are all right upon arches and pergolas, but I think walls and fences can be better clothed with the strong-growing Teas, Hybrid Teas and Noisettes. What can be compared with a well-developed plant of Rêve d'Or clambering over a lofty south or west wall? It is a grand, fast-growing golden Rose which should be more frequently planted, but it is impatient of the pruning-shears; indeed, it is well almost to neglect it for a few years as far as pruning is concerned, and when it is pruned just shorten back the laterals a little and keep as much of the old wood as remains sound through the winter.

These glorious old Roses are a real joy to behold, and if we have the patience to wait for their development, they will richly reward us with a wealth of bloom.

There is a tendency at the present day to demand that the walls should be covered immediately, and we plant long-shooted, pot-grown plants very often, thinking this will help us to obtain our desire. But it is all a huge mistake. If the plants do attain a fair height, they are most miserably gaunt and ugly, and it is by far the better plan to commence with a sturdy plant from the open and prune it back to 2 feet the first year; then we may have during that summer quite a vigorous growth ready for a good crop of bloom the following year.

Of course, it is necessary to prepare well for these Roses. Give the border almost as much care as though we were planting a Grape Vine; that is, dig it deeply, fully 3 feet, but keep the subsoil in its own place and see that plenty of good farmyard manure is added, also some basic slag, which is a splendid reserve of food for some years. A handful or two of bone-flour also, given at the time of planting, will add a quality to the blooms that will be very gratifying.

There is no reason whatever why we should not have grand exhibition Roses from our walls, because we have everything in our favour, that is, thoroughly-ripened wood. We may have splendid blooms of Climbing Kaiserin Augusta Victoria far surpassing the original kind if we take the trouble to disbud a little. I am no advocate for nailing these Roses in so wonderfully exact. Rather would I allow some branches to fall away a bit, and to do this a few long spikes driven into the wall will serve to fasten such branches to. The walls appear less formal if this is done, and the growths are covered with bloom.

EXHIBITING ROSES IN BASKETS.

No one should miss an opportunity of planting Duchesse d'Auerstœdt. It is one of the best of the deep golden yellows, and is better for outside walls than Climbing Perle des Jardins, whose growths mildew so badly.

Dr. Rouges is another beautiful Rose, with quaint Cactus Dahlia-like blooms of lovely reddish colour with orange shading. It is a most profuse bloomer. Mme. Hector Leveillé and Mme. Charles Monnier are both very fine as yellowish kinds. A splendid red is Climbing Papa Gontier, which yields a great quantity of its very shapely buds that are always useful. Climbing Liberty and Climbing Richmond are both good reds. Florence Haswell Veitch will never fail to please, because not only has it a brilliant scarlet velvety shaded bloom, but it is so deliciously fragrant. These last three would be best planted against a moderately high wall, as they would not grow so rampantly as Dr. Rouges and Duchesse d'Auerstœdt.

A Rose that gives some superb blooms, though very sparsely, is E. Veyrat Hermanos. This should be planted where it can ramble away like Rêve d'Or, with similar treatment as regards pruning. The blooms are superb, reminding one of Comtesse de Nadaillac, but they need disbudding; in fact, it would pay to do this more frequently with these large-flowered kinds.

Billiard et Barré is a very rich yellow and a fine climber. It is much better used in this way than as a bedder. Belle Lyonnaise is another fine old sort; so also is Celine Forestier, which gives sheaves of its curious flat sulphur yellow flowers quite early in the season. A grand pink is Climbing Caroline Testout, perhaps rather shy, but good when it can ramble away, as it will. Climbing Captain Christy, though scentless, is worthy of a place; so also is Climbing Lady Ashtown if it is sprayed frequently to check its mildew tendency. Lady Waterlow is a superb variety, and should be in every garden; if not on a wall, then as a free bush.

I do not see why the Lyon Rose should not be used as a climber. I am planting it in this way and also as an espalier Rose, a form to which I imagine its somewhat erratic growths are peculiarly fitted. A favourite Rose of mine is Souvenir de Mme. Joseph Metral. Every bloom is as big as Mamie and of a delightful cerise colour, and it grows most freely. Noella Nabonnand is another beauty and as fragrant as it is beautiful, its huge semi-double flowers being quite gorgeous in effect.

I cannot name all that are good, but I just mention the foregoing, which if planted will enrich the garden very considerably, and a place should be found for them all if possible. Some truly beautiful effects are now and then seen in country gardens where some of the foregoing climbing Roses are allowed to cover coach-houses, tool-sheds and similar positions, for then they all contribute towards the beautifying of the place.

DANECROFT.

ONE of the most pleasing features of recent exhibitions of the National Rose Society has been seen in the well-contested classes for Roses—not on show-boards, but shown in a far less formal way, and that is in baskets. That Roses when so exhibited are infinitely more effective and natural no one will deny, and the Rose-loving public must feel that they owe a debt of gratitude to the Rev. J. H. Pemberton, president of the National Rose Society, who is responsible for having popularised this method of exhibiting the Queen of Flowers. Roses of many classes are amenable to this informal mode of showing,

NEW BREAKS IN ROSES.

THE history of the modern Rose is marked from time to time by the appearance of varieties which, constituting new breaks, reassert her supremacy in the garden. Varieties like Gloire de Dijon and Maréchal Niel will suggest themselves to all as among those which have influenced our best and latest yellow Roses, and Mrs. W. J. Grant is another instance of how much one variety can help the progress of the Rose. This fine Rose, like Mme. A. Chatenay, Caroline Testout and others, was the offspring of V. Verdier, and gave, in combination with La France, which was another break, many of our best autumnal bedding varieties. Neither do we forget Soleil d'Or, the hybrid from Persian Yellow, which has



A BASKET OF ROSE LYON EXHIBITED AT THE NATIONAL ROSE SOCIETY'S SUMMER SHOW IN LONDON.

the singles, such as Irish Elegance, associated with their own foliage, being particularly graceful so long as the blooms keep fresh. Some of the newer Roses with comparatively small flowers, notably the new race known as pernetianas, would be quite lost on the show-board, but are seen to the best advantage when shown in baskets.

In the accompanying illustration is seen a basket of the Lyon Rose, shown by Mr. Chaplin at the National Rose Society's Summer Show. The basket in question, although containing blooms of the finest quality, would have been even more effective if buds as well as expanded flowers had been shown, and this, we think, would more closely carry out the wishes that the Rev. J. H. Pemberton had in mind when advocating this admirable method of showing Roses.

introduced new features into our Hybrid Teas, giving us such varieties as Lyon, A. R. Goodwin and Mrs. A. R. Waddell, not to speak of those not yet offered, such as the superb Mme. E. Herriot, or the dainty Willowmere, or that much-improved Rayon d'Or which is to be called Mrs. G. Beckwith. The influence of the Austrian is already entering, too, into our climbers, and we find this in such sorts as Louis Barbier and Entente Cordiale (of Guillot).

But here the result has mainly been one of colour. With two classes of climbers now merging into one, the multiflora and wichuraiana hybrids, we have new effects in habit, foliage and size of bunches. All these improvements are largely derived from that complete break, Crimson Rambler, although the importance of Rosa wichuraiana must not be forgotten, and to the multifloras we also owe one of the most distinct additions to our gardens—the

baby ramblers. Of these, the most striking are Mrs. Cutbush, Jessie and Orleans Rose. In Maman Turbat and Yvonne Rabier we have promise of a corresponding race of baby wichuraianas of much novelty and beauty. In these cases it will be seen how often a new race originates from some startling novelty which arrests the attention of hybridists. At least, this is so with the more modern breaks. In the olden days the raisers of new Roses must have been men of imagination and intuition in no slight degree, for they had no Mendel's law to guide them. I have by me some old portraits which, deficient as they are, afford much cause for thought. These men struck some potent notes, though they were perhaps before their time, for there are yet upon the shelves some of their unworked themes, which should be developed.

The Roses which make history are, after all, not many, and there are some still which are waiting their turn. As an illustration let me go back to a favourite theme of mine, the Musks. These and the Noisettes, for the two are one, have been for a long period in the shade, but their day is nearly come. It is not for nothing that the National Rose Society gave this year at least three awards for novelties of Musk origin, varieties perhaps not in themselves of superlative merit, but significant of many possibilities, since herein lies the promise of autumn climbers. The chief work in this class has been done within the past few years, and yet lying at hand was the material from early days. My attention was first called to this class by some German novelties, Leonie Lamesch and others, which showed the qualities of the Noisette breed. The credit for these must be attributed to Mr. P. Lambert of Trier, one of the most original-minded rosarians we have. Rose-growers will recollect his perpetual climber Trier and his other Musk hybrids, half-climbers like Adrian Riverschon and Dr. Mittweg, and his dwarfs of a similar strain, Gustave Meyer, Meise and others. Mr. Pemberton has proved a worthy rival to Mr. Lambert, and with his Danae has certainly introduced into the climbing Musks what was largely lacking—colour; so the Germans will not have it all their own way. We have yet to eliminate tenderness from this race and to improve their floriferousness, although they flower well in the autumn already.

Another break which we should not fail to remark is Grüss an Teplitz, originating, I believe, partly from the Chinas, but also with the blood of Gloire des Rosomanes, ancestor of our crimson Hybrid Perpetuals. This is a most original break, and one proving how necessary it is to sometimes hark back to earlier types for novelty. Grüss an Teplitz has already justified its existence in giving us Hugh Dickson, the best red autumnal.

Much of the above reads like ancient history, but one feels that in these earlier developments we shall find guidance for the future.

Now that the hybrid bedding Roses are, as was the case with the Hybrid Perpetuals of an earlier period, reaching probably their highest point, it is needful to look for new points and features. Already the H.T.s and H.P.s are being combined, as in Frau Karl Druschki. Let us briefly see what we have yet to gain. Such qualities as texture of bloom, of petal, mildew proofness, hardiness and vigour, in combination with fragrance, leave a wide field to be yet covered. The large-flowered climbers have not yet reached the excellence of such few kinds as Mme. A. Carrière, nor is there yet a really first-rate red large-flowered kind. The evergreen foliage of the wichuraianas has yet to be distributed. Even the species might be searched for novelty and their fruits improved.



A WEEPING STANDARD OF ROSE ELISE ROBICHON IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY.

There is a new Hybrid Tea, Mrs. E. Powell, with glorious rosy red flowers. The wood is purple, the foliage almost black, no signs of mildew, hardy and vigorous, which illustrates how each additional quality enhances the value of the whole. Such qualities are to seek, for we must add them to even our best Roses. A Lyon Rose or a Rayon d'Or which did not drop its leaves would be a distinct advance. There are enough new wild kinds from Asia alone to afford work for a whole generation. To work with species is long and tedious, yet to secure even only one kind of such supreme loveliness as, say, sinica Anemone should prove a sufficient reward. GEORGE LAING PAUL.

ROSE ELISE ROBICHON AS A WEEPING STANDARD.

WEEPING standard Roses are becoming more and more popular in each succeeding year, and deservedly so, for it is beyond doubt one of the most graceful forms in which Roses may be grown. The specimen plant shown in the accompanying illustration is one of many as seen growing in the Royal Horticultural Society's Gardens at Wisley. In these gardens weeping standards are a great success, and constitute a most pleasing feature. Among the best of the varieties we noted in these gardens last June were François Guillot, Alexandre Pirault and Joseph Billard. The trees had all been grafted about four feet from the ground, and throughout June were literally clothed with bloom down to the soil-level.

COLOURED PLATE.

PLATE 1456.

ROSE DUCHESS OF WELLINGTON.

AMONG Roses of recent introduction, the variety shown in the accompanying coloured plate is destined to hold a prominent position. It is one of the many good Roses that the famous Irish firm, Messrs. Alex. Dickson and Sons, have given us, and was first put into commerce in 1909. It is pre-eminently a garden Rose, combining good habit with vigorous growth and freedom of flowering, and is not addicted to mildew so much as many other bedding Roses. In addition to flowering freely during the summer, it is particularly free in the autumn, when its rich colour is, in many instances, seen to even better advantage than earlier in the year. This colour is almost, if not quite, unique among Roses, and has endeared the variety to all who have seen it in good condition. Apart from its colour it has a delightful fragrance, a feature that is, alas! too often absent in present-day Roses. It is now possible to have a Rose garden of all yellow or shades of yellow Roses, should one so desire, now that we have, in addition to Duchess of Wellington, the brilliant

Rayon d'Or, James Coey, Arthur R. Goodwin, Sunburst, Lady Hillingdon, with the older Gustave Regis, Le Progrès and Mme. Ravary. We mention these to show to what extent the list of Roses with yellow-hued flowers has been enriched during recent years. But good as most of these are, they can only be regarded as the forerunners of a race of yellow Roses that will do much to revolutionise the cultivation of the Queen of Flowers, not only for the embellishment of our gardens, but for market purposes. The flowers from which the accompanying coloured plate was prepared were kindly supplied by Messrs. H. Merryweather and Sons, The Nurseries, Southwell, Notts.



“ROSE DUCHESS OF WELLINGTON.”

THE BEST ROSES FOR TABLE DECORATION.

I AM sure everyone will agree with me that, lovely as all flowers are for dinner-table decorations, Roses are really the favourites; one never tires of them. For one reason, there are so many varieties, and all varying in their form, size and beauty. Then their scent is so delicious that, however hot a room may become, no one will be overcome by their perfume, as is the case with so many other flowers. It is very difficult to say which are the best Roses for decoration, as some prefer large Roses and others single ones. Unfortunately, so many of the single Roses close up at night, Irish Elegance being an exception. To my mind nothing looks more exquisite than a dinner-table decorated with Irish Elegance, with a low silver bowl for the centre-piece and silver vases round, the lovely long-pointed, orange red buds and the fully open salmon-tinted flowers being brought out to their fullest perfection by the white table-cloth and the light of the candles. Mme. Abel Chatenay is a general favourite and always looks lovely; it is also such a graceful Rose that even when full blown it never looks heavy.

I think a great deal depends on the size and shape of a table what flowers should be used. I remember decorating a very long table with large blooms of Caroline Testout and long trails of Rose foliage from one end to the other; it sounds somewhat heavy, but the effect on the large table was most pleasing. Melanie Soupert is a lovely Rose if one can get it just in the bud, but it opens very quickly, and when full blown is not very pretty. I think a table of Richmond, arranged in white china vases with pale green foliage and long feathery trails of Asparagus Fern, is very effective. A lovely Rose for decoration is Joseph Hill, the stems being so very stiff and long; it also lasts a long time and looks well to the end. Sulphurea is a pretty little Rose with its own dark foliage, especially in the autumn when Roses are becoming scarce. Sinica Anemone, a large silvery pink single Rose, and one of the first to come out, is very striking. Dawn makes a very pretty table done in rather low bowls and with some other foliage, its own not being adaptable for decorative purposes. I am very fond of all the wichuraiana Roses.

Alberic Barbier, one of the earliest, mixed with Carmine Pillar, always looks well. François Juranville is also delightful with its lovely shell pink flowers, shining leaves and red stalks. Dorothy Perkins, everyone's favourite; Hiawatha, if you can get it when the flowers have just opened; and Lady Godiva, which is so easy to arrange with its pretty little clustered sprays of the palest pink flowers and bright green leaves, are all beautiful.

A dinner-table of all very pale-tinted Roses is charming if they blend well together, such as White Maman Cochet, Viscountess Folkestone, Safrano and Gustave Regis. Some of the new Roses seem especially adapted for tables, being small

and easy to arrange—Sunburst, which is lovely and lasts well; Mrs. Fred Straker, Lady Pirrie, Lyon, Mrs. Alfred Tate and Lady Hillingdon. Though the latter is an exquisite colour, the buds and the flowers are so very set and so much alike that it makes rather a stiff and somewhat disappointing table. I am not very fond of pure white Roses for a table; against the white cloth they look too cold and colourless, and have a very artificial look unless coloured candle-shades are used. Then the result is very good.

It is always very difficult to get just the right vases for the right flowers; tall, slender vases often look bare and unfinished, even when surrounded with sprays of foliage; yet if you have many low round vases, the result is often too squat and solid-looking. The centre-piece should never be too high, as it hides the view across the table. If one is the happy possessor of old silver decanter stands, what can be more lovely and effective

JUDGING NEW ROSES.

IT is generally agreed that the present system adopted by the National Rose Society in awarding its medals leaves much to be desired, but the problem is what can be substituted in its place. I am firmly convinced a trial ground is needed, and we shall not arrive at a just estimate of the value of a novelty until such a trial ground is an accomplished fact.

It has been suggested that a jury should be elected to visit the raisers' gardens and inspect the novelties; but seeing that such gardens are widely apart, this scheme does not commend itself to the practical man, and yet some arrangement of this sort is needed, and for this reason: If one can see a large quarter of any new Rose growing, one is able to form a just opinion of its merits better



AN EFFECTIVE ARRANGEMENT OF ROSE DOROTHY PERKINS AND ITS WHITE VARIETY ON THE ROSE PERGOLA AT KEW.

for the outside vases; also the pretty cut-glass jelly-glasses that our grandmothers prided themselves upon, and who would have deemed it desecration to have used them for flowers. Unfortunately, we do not all possess these old treasures.

J. B. LANGTON.

ROSE MRS. FRED STRAKER.

This delightful Hybrid Tea Rose is destined to become very popular, perhaps even to rival Mme. Abel Chatenay. The long and elegant buds finish beautifully, making a lovely coat-flower, and it is ideal for sprays. As a garden Rose it will be one of our very best, the growth being erect and vigorous, and its foliage, being bronzy green, contrasts well with its flowers. Moreover, one is not troubled by mildew, as this variety seems to be quite immune from this pest.

than from a dozen or two dozen selected specimens. British Queen was submitted to the judges at Belfast and passed over, whereas some of the judges who saw the fine array of it at Portadown would have given it a gold medal without hesitation, an honour that it has since gained. My opinion is that a sub-committee could well be appointed by the National Rose Society to visit the various raisers and make notes, which would be of great value when the Roses were brought before the judges at either of the society's shows. The sub-committee should be instructed to watch the behaviour of each Rose as a cut-back, for I am persuaded that many gold medals have been wrongly awarded to Roses that are good as maidens only. It is easy enough to get a fine big bloom from a maiden plant; but how is it going to behave when the amateur purchases it?

One of the loveliest Roses with me this year has been Mrs. Arthur Munt. Now I know this variety failed to obtain the gold medal, but it would most certainly have succeeded had the jury seen the Rose growing. Again, I venture to say the gold medal would not have been awarded to several varieties that did gain it, for a like reason.

I have an alternative suggestion to make, and that is that some gentleman should be asked to allow a trial of novelties to be made in his garden, say, for two years. Supposing our honoured secretary, Mr. Edward Mawley, would undertake such a trial, Berkhamsted would be easily reached by a committee of experts appointed by the society, and awards made on the spot, or, finally, when the Roses were put up at the show. Of course, it would be better still if the National Rose Society possessed its own trial ground, where all members could have access. Such a Rose garden under the charge of a thoroughly reliable and capable superintendent would be of untold value to the society, and would be, I feel sure, well patronised by the Rose-loving public, who would find in it an extra inducement to join the society. The augmented number of members would soon repay the society for the upkeep of the garden. We want such a garden not only for novelties, but also where one could see some of the good old Roses for comparison. Supposing a certain variety was thought to be too much alike another, this matter could be settled right away by comparison. This is a very fitting time to ventilate this subject, and I feel sure no one wishes this country to be rivalled by France and America, for both these nations possess trial gardens for Roses. W. EASLEA.

THE BEST AUTUMN ROSES.

EVEN to the present day June is often styled the month of Roses. It is true that we get a fairly good show of bloom during that month in favourable seasons, and used to have a greater proportion among the older varieties, but I venture to say we have quite as much right to claim September as a Rose month since the advent of the numerous and charming varieties of Hybrid Teas. There are a great number of these which appear at their best during autumn, and this is all the more noticeable because so many of our so-called summer bloomers are quite done with, and the majority of the Hybrid Perpetuals give few autumnal blooms, and then only one here and there. I must, however, make an exception in favour of Frau Karl Druschki, Victor Hugo, Ulrich Brunner and Mrs. R. G. Sharman Crawford from this section.

Such Teas and Hybrid Teas as G. Nabonnand, Peace, Betty, Mme. Ravary, Killarney, Theresa Bevan, Edu Meyer, Lady Ashtown, Lady Battersea, General Macarthur, Grüss an Teplitz and Mme. Antoine Mari—only to name a dozen as they

occur during writing—are among the freest and choicest of all Roses during the autumnal days. The cooler weather conditions would seem to suit this class of Rose far better than the brighter days of midsummer. Certainly they open in a firmer and most lasting way, while the autumn foliage of many is also much deeper in colour than when somewhat crippled by bright sunshine, which has a tendency to dry up these succulent and bronzy purple shaded growths, many of which are well worth growing in the autumn for the beauty of their foliage alone. Irish Elegance, G. Nabonnand, Mme. Ravary, Perle des Jardins, Joseph Hill and Grüss an Teplitz are half-a-dozen with



NEW ROSE BRITISH QUEEN, THAT GAINED A GOLD MEDAL AT THE NATIONAL ROSE SOCIETY'S AUTUMN SHOW.

particularly pleasing foliage, and not so prone to mildew as many.

A few of our best autumnals produce large, spreading trusses that are carried boldly, while each flower is upon so long a stem of its own as to allow of useful cutting without destroying a number of unopened buds upon the truss. La Tosca, Peace, Mme. Antoine Mari, Peggy, Molly Sharman Crawford, Corallina, Mme. Abel Chatenay, Mrs. A. R. Waddell, Edu Meyer, Lady Battersea, General Macarthur and Betty are twelve good examples of this.

To me it appears that the autumn Roses have a more pronounced perfume than those opening

so hastily in the summer, perhaps because the centres of the flowers, where the perfume seems to emanate from, has had a better opportunity to develop.

Uckfield.

A. P.

A FEW GOOD ROSES FOR MASSING IN BEDS.

DURING the past few years there has been a distinct advance—chiefly among the Hybrid Teas—of Roses well suited to this form of decoration. In my opinion, formed chiefly from our success with it at Gunnersbury House Gardens, Joseph Hill, the subject of the illustration on page 519 is one of the best. It is good at all seasons, both early and late. Just recently we have had some very fine flowers, and that, too, in large trusses without disbudding. (This form of culture is not countenanced here.) It is invariably good in colour—a salmon pink, shaded with yellow and ochre, outside of petal, coppery pink. In growth it is very vigorous, yet very sturdy; hence it stands the winds well and its hardihood is beyond any question. We find hard pruning to suit it admirably. I am somewhat surprised to think it is not better known. At the recent autumn Rose show of the National Rose Society it was rarely to be seen in any stand, yet it is one of the most attractive of all. Its rich bronzy, healthy foliage lends itself to this feature. Mildew gives it but little trouble. Of other Roses that thrive well here, Prince de Bulgarie is one of the best. It is somewhat in the way of the preceding, but with more variation in its colouring. Souvenir de President Carnot is excellent; nothing better in its colour. Both Richmond and Liberty are fine as crimsons. Sometimes one is best and sometimes the other. Antoine Rivoire has been perfectly lovely throughout this season; better than last year when so hot. Lyon Rose has also been better. I wish it did not shed its leaves so prematurely. Mme. Abel Chatenay has been most troublesome with mildew, yet it is almost indispensable in its colour. Kaiserin Augusta Victoria is not beaten yet in its purity of colour and freedom of flowering. Corallina is excellent, and quite immune from mildew with

us. La Tosca is a fine Rose, most robust and very free, with scarcely a trace of mildew upon its lustrous foliage. Souvenir de Pierre Notting is excellent as a pale yellow, better in dry weather than in wet. Last year it was fine. This makes a dozen varieties, all of which we find to do well with hard pruning. I should have added that ever popular Caroline Testout. Grüss an Teplitz, as a deep crimson scarlet, is fine, but with us it mildews badly, and the same applies to Frau Karl Druschki. The former we prune moderately and the latter scarcely at all, merely thinning out the weakly wood.

JAMES HUDSON, V.M.H.

Gunnersbury House Gardens, Acton.

NOTES ON NEWER ROSES.

(Continued from page 499.)

ALL Roses fall naturally into two sections (except from the botanist's point of view) and I will call them decorative and exhibition. These notes will be divided in the same way, with a further subdivision as regards the former into dwarfs and climbers, and as regards the latter into the still useful but almost worn-out sub-divisions of Hybrid Perpetuals, Hybrid Teas and Teas. As a new Rose is more important to the exhibitor, I will deal with exhibition Roses first, and endeavour to condense my notes thereon, so that they will all appear in the next four issues, and so perhaps may prove of service before all the blanks are filled up and the discards replaced from the nurseries—for it should be an annual practice for the exhibitor to run through his Roses, especially where his space is limited, and weed out such varieties as are no longer serviceable in the strongest sense of the word. By that I mean plants that do not give a good percentage of exhibition flowers per plant. Roses differ enormously in this respect, and I think one might almost say that, the older the variety, the greater the number of plants that will have to be grown to make sure of finding a good flower when you want one.

The discriminating exhibitor, with his carefully-thought-out list of, say, 200 varieties, scores heavily over his less careful rival, who may grow his Roses equally as well, but who is growing a number of plants that are good old names, but that seldom give him a flower that he can stage with advantage. Perhaps the National Rose Society might see its way clear to draw up an "ideal" list for the 200 plants man, giving not only the varieties, but the number of each that should be grown, having due regard to locality and other matters that would necessarily have to be considered.

EXHIBITION ROSES ONLY, 1909-12.

Hybrid Perpetuals.—These are very few and far between. Doubtless a few more might be discovered labelled as Hybrid Teas, but there are apparently only two that I need refer to under the head of Hybrid Perpetuals.

George Arends (Hinner, 1910).—A seedling with a lot of Frau Karl Druschki blood. It is rose pink in colour, of good habit of growth, but is not so good as Elizabeth, and is similar. It has more scent than that variety, but I do not think we want them both, and Elizabeth is more reliable.

Gloire de Chedane Guinoiseau (Guinoiseau, 1909).—This is a good Rose, and has been very largely exhibited this year. A good-coloured crimson, it has claims to be considered one of the best of its colour, and all exhibitors should grow it. It has the further advantage of having been three years in commerce, and so has reached normal prices—1s. to 1s. 6d. each. It has frequently this year been found winning the medal for the best Hybrid Perpetual in the show, and when a Rose does that pretty often, nothing more need be said. It lasts well when cut, and does not grow smaller in the exhibition box, as some of the reds will. Its percentage per plant is fairly high—considerably better than either Edward Mawley or Leslie Holland in this respect. Altogether I can recommend this Rose as worthy of a trial.

This is a meagre list of Hybrid Perpetuals for three years, but I can call to mind no others.

Southampton.

HERBERT E. MOLYNEUX.

(To be continued.)

THE GREENHOUSE.

WORK AMONG THE CHRYSANTHEMUMS.

DURING the whole of this month the plants will be developing their buds, and by the end of it cultivators will be able to judge as to the quality of the blooms of the various varieties that are being grown for exhibition and for forming conservatory and greenhouse groups. In order to have late, medium and early varieties at their best on a given date in November, it will be necessary to do a considerable amount of shifting of plants to and fro from one house to another, and even in different positions in the same house. There are also the questions of artificial heat, shading and feeding. All combine to aid in the production of perfect blooms. Many cultivators like to arrange their plants in groups directly they are

seen numerous white surface roots killed in a few hours owing to the too frequent application of nitrate of soda and given in too strong doses. If a teaspoonful of nitrate of soda be dissolved in a gallon of water, and one dose of this strength only be given to plants that are backward during the whole of October, it will be sufficient. The concentrated manures sold by horticultural sundriesmen should never be given stronger nor more frequently than is recommended by the vendors. I know that many inexperienced cultivators overdose their plants, thinking that they can develop a monster bloom from a tiny bud. Result—crippled root action and a badly-developed bloom. I have seen buds that never properly developed, owing to the plants bearing them having been fed too much. Clear soot-water made from old soot may be given occasionally.

Fire-heat and Ventilation.—A nice buoyant atmosphere should be maintained in the house. The colours are clearer and richer when the blooms open in a rather cool temperature and dry atmo-



AUTUMN BLOOMS OF ROSE JOSEPH HILL IN THE GARDENS AT GUNNERSBURY HOUSE, ACTON.

taken to the houses. This should be avoided, if possible, as the grouping together of many plants for a period of five or six weeks results in the loss of bottom leaves wholesale. In all cases it cannot be avoided, on account of lack of room, but where there is ample space it is much the best to put the plants in twos and threes in different parts; then the air can circulate freely through them, and their basal leaves are retained in a fresh condition until the blooms are three parts developed at least. The groups may be formed when the blooms are at this stage, and owing to the freshness of the leaves, the effect will be more pleasing.

Feeding.—This should be continued until the flowers are a little more than half developed. There is much art in the feeding of a plant. Some cultivators do more harm than good in the use of artificial manures. Nitrate of soda, sulphate of ammonia and similar stimulants which are of a strong nature must be used with great care, else many valuable roots will be killed. I have

sphere. A little night ventilation is essential, and more in the daytime when the weather is fine. In foggy weather have rather more heat in the pipes, and cover the slightly-open ventilators with coarse scrim or tiffany. Shade any forward blooms by placing sheets of paper over them at a distance of 18 inches inside the house. By applying shading to the outside, other varieties which require all the light and sunshine possible may be unduly shaded. Such varieties as Mrs. A. T. Miller, Master James, Rose Ellis, Rose Pockett, Mrs. L. Thorn, Evangeline, Kara Dow and Reginald Vallis develop their blooms quickly. Mrs. Gilbert Drabble, Mr. Thornton, Master David, Countess of Granard, Marie Loomes, Francis Jolliffe, Edith Smith and other late-flowering sorts develop their blooms more slowly. All varieties of the incurved section should be fully developed, else their depth is much diminished, but they must not be forced open. The single-flowered section take the shortest time of any.

AVON.

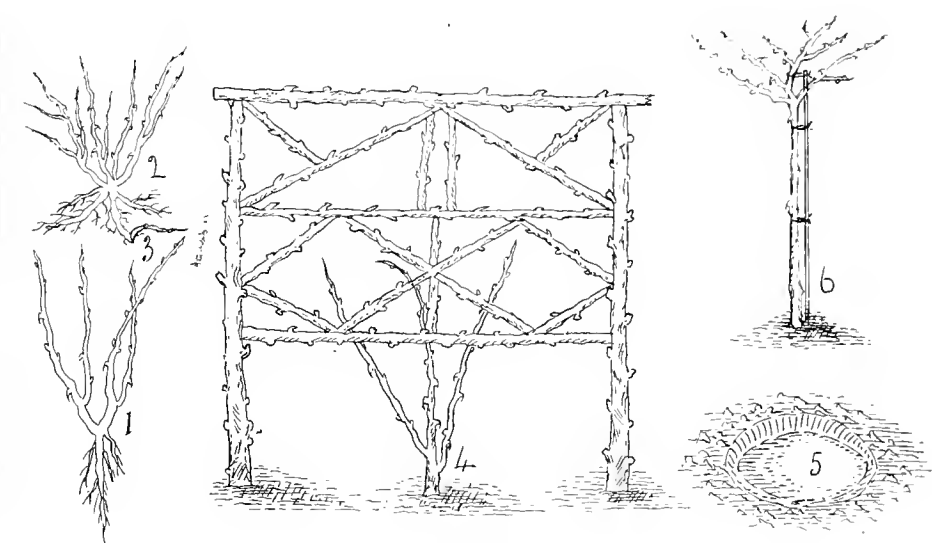
GARDENING FOR BEGINNERS.

HOW TO PLANT ROSES.

THE year 1912 will be remembered for the great wealth of Roses produced, and hundreds of lovers of these charming flowers will wish to grow plants in their own gardens. The inexperienced cultivator will look for instructions as to the best way to prepare the soil and plant the trees. The following hints will prove useful to those who wish to plant trees of the various sections in open beds and near walls and fences for the furnishing of the garden generally.

How to Prepare the Soil.—A fairly heavy loam is regarded as an ideal one in which to grow Roses, and it is, undoubtedly, a splendid rooting medium. Such soil, however, is not found in all gardens; but, notwithstanding this initial drawback, the enthusiast will not hesitate to plant Roses in a rather light soil or in a gravelly or poor one. Where rich loam obtains, the cultivator will not need to do more than deeply trench it, leaving the subsoil at the bottom, as manure can be applied in the form of surface mulches afterwards. Light, sandy or gravelly soils must also be deeply trenched, and in each case the subsoil should be broken up with a garden fork and left below.

When Roses should be Planted.—The season for planting extends from October to March, both months included. The latter part of October and the whole of November is an ideal time for planting to be done if the soil is in good condition and the weather is open and dry. Certainly it is better to plant before Christmas, if possible, than afterwards, though the work may, and should, be done after Christmas if it is inconvenient to do it before. When the Roses are received from the nursery, they must be unpacked at once and, if the roots are dry, placed in a cistern or tub of water. No time must be lost in getting the trees planted, as exposure of the roots to the drying wind is harmful. If frost prevails, the bundles should be placed in a very cool shed or cellar, and be left there until a thaw comes. In this case also soak



PLANTING BUSH, CLIMBING AND STANDARD ROSES.

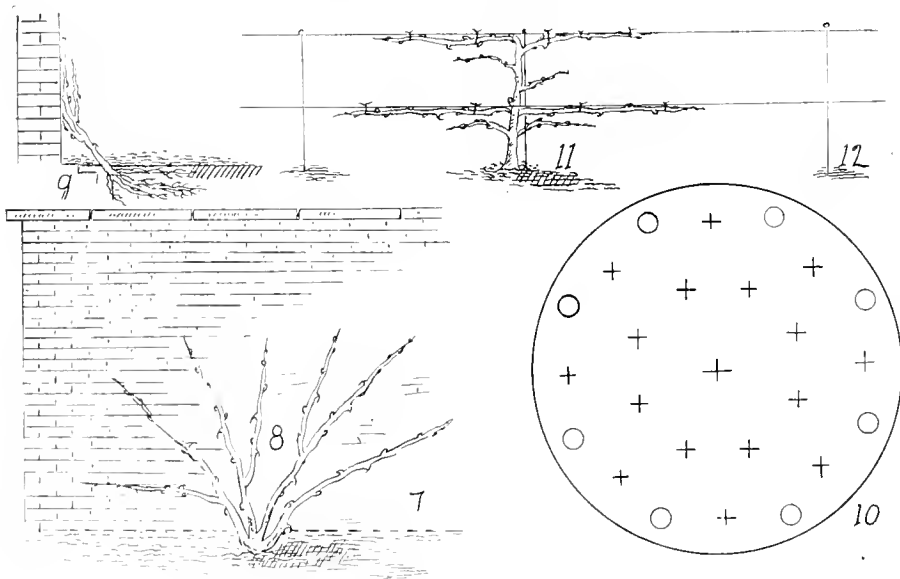
the roots for a few hours before planting is done. With regard to the actual planting of the Roses, the illustrations will greatly assist the inexperienced to understand how the work must be done.

The Illustrations.—Many plants are purchased similar to the one shown at No. 1. Very strong-growing varieties often possess roots of this kind, especially those belonging to the Hybrid Perpetual section. No. 2 shows a tree suitable for a wall or trellis. If any roots are damaged as shown at No. 3, such roots must be cut back with a sharp knife before planting. No. 4 shows how to plant a Rose which is intended for the covering of a trellis, screen or pergola. The tree should be planted between the posts for two reasons, namely, to avoid removing soil and loosening the posts, and

to avoid loss of trees through fungus, which often grows around posts. Healthy trees soon grow and cover all posts with branches. No. 5 shows how to make the holes for the plants. They must be several inches wider every way than the spread of the roots, and not too deep. No. 6 shows a standard Rose planted and staked, and it may be noted that the stake supports the head as well as the stem. No. 7 shows the right way to plant a Rose near a wall, with the centre, No. 8, well open. The centre of a wall tree always closes up first. The roots must be planted about ten inches or one foot away from a wall, so as to avoid the wall "footings" as shown at No. 9. Avoid overcrowding the plants in beds. Mixed varieties of Hybrid Perpetuals should be planted 18 inches apart. When one variety occupies a bed and is a strong-growing one, 2 feet must be allowed. The circles and crosses denote the position of the plants in a round bed. No. 11 shows how to plant Roses to cover low or high trellises. No. 12 shows the iron rods for supporting wires to which the branches are trained. Plant firmly and slightly deeper than the bushes have been growing in the nursery. G. G.

A USEFUL GREENHOUSE PLANT.

CRASSULA FALCATA, a South African succulent, is more generally known under the name of *Rochea falcata*, and as such it may be often met with in old-fashioned gardens. Introduced over a century ago, its merits are, in the present-day race for novelties, frequently over-looked, yet when in flower it is a really pretty plant. It is a plant of sturdy growth, the stout, upright stem being furnished with thick, fleshy, sickle-shaped leaves of a rather glaucous tone of colour. The flowers are small, bright red in tint, and disposed in closely-packed, flattened heads, the golden anthers forming a notable feature of the inflorescence. It is quite distinct from the old *Crassula*, or *Kalanthes coccinea*, which, by the way, is now included in the genus *Rochea*.



PLANTING ROSES AGAINST WALLS AND IN BEDS.

THE FLOWER GARDEN.**SWEET PEA NOTES.**

Autumn Catalogues.—As was promised in an earlier issue of *THE GARDEN*, notes will be given in this and succeeding numbers of the varieties which the leading specialists in Sweet Peas are offering. It has already been hinted that stocks of all the finest novelties, and also of many of the leading modern sorts, will be decidedly on the short side, and the man who orders early will have a far better chance of getting precisely what he requires or desires than the one who procrastinates and cannot make up his mind until the season is on the wane. "Order early" is an excellent motto. The best firms are all somewhat shy of giving definite information, and the promises are all qualified in some manner or another.

A Birmingham List.—Mr. Robert Sydenham openly avows the fact that he is not a raiser of novelties in Sweet Peas or anything else in the gardening way, but he has a wonderful capacity for finding the "swans" raised by others, and will always purchase stocks provided they are sufficiently bulky to be worthy of his consideration. Among his best, though all are not necessarily offered this season for the first time, is *Lilian*, a soft waved pink, flushed with buff, which has the happy habit of carrying four flowers on a stem. Visitors to the Royal International and other important shows will have made a note of it, because it was splendidly staged. *Princess Mary* is a waved medium blue very much in the way of *Flora Norton Spencer*, but a marked advance on that charming variety. It generally gives fours. The colour of *Zarina* is popular with practically everyone, and the *Spencer* form that Mr. Sydenham will offer is certain to have a warm welcome. It has been suggested on more than one occasion that *Lord Nelson* should be relegated to the region of superseded varieties, but there have always been those who maintained that it was fully entitled to its present position because there was no other blue comparable to it. Now that Mr. Sydenham has a true *Spencer* form, the old one will have to go to the wall, and the new-comer will spring instantly into the highest favour among growers for home decoration as well as for exhibition. It is described as standing the sun better than any other Sweet Pea of its colour, and as yielding four flowers on practically every stem under good management. *Cerise Spencer* is a hackneyed sort of description; it conveys an accurate idea of its colour, but not of the fact that it is nearly sun-proof, which is, after all, one of the most important of all recommendations. The varieties that emanated from this source last season have proved to be thoroughly worthy of culture, and they should be borne in mind in compiling lists for next year. The names and colours are: *Edith Taylor*, salmon rose; *Barbara*, salmon orange; *Lady Evelyn Eyre*, pink, suffused salmon, large; *Emperor*, scarlet, exceptionally fine; and *Thomas Stevenson*, which reigns supreme in its particular shade. This is not, as will be acknowledged, a formidable set, but it is a good one.

An Ingatestone List.—For some years Mr. E. H. Christy, The Beacons, Ingatestone, ranked with the leading amateur enthusiasts in Sweet Pea culture, and he has now blossomed forth as a grower and seller of seeds. He is one of the staunchest advocates of reduction in the number of varieties, but his list demonstrates the fact

that he does not see his way clear to fewer than five dozen. The selection is beyond question an admirable one, comprising as it does all the finest varieties in cultivation. Mr. Christy has not offered any novelties of his own raising, but no doubt he will do so before many years have passed. Up to the present he chooses the best of those introduced by others and grows them on his own land in Essex, where, we are all agreed, some of the finest Sweet Pea seeds that one could desire to have or expect to see have long been produced. In this list the number of seeds in a packet is stated "subject to crop," and I for one shall be much surprised if Mr. Christy is able to come within speaking distance of the quality in the case of many varieties which he is offering.

HORACE J. WRIGHT.

A BEAUTIFUL BULBOUS PLANT.

(*HABRANTHUS PRATENSIS.*)

THIS beautiful bulbous plant was introduced from Chili in 1840, and is considered by many to be of doubtful hardiness, though here it stands without any protection whatever. The treatment we give it is as follows: The bulbs are planted in September in borders deeply dug, with a liberal quantity of leaf-mould incorporated in the same manner as for *Daffodil* culture. They could no doubt be planted with almost as good results well into October. They are planted in rows 1 foot apart, 9 inches from bulb to bulb and 4 inches deep. After planting, the borders are given a coating of leaf-soil 2 inches thick. The only attention the plants then receive is an occasional stirring of the surface and the keeping down of weeds.

The soil here is sandy loam, and the gardens are situated six miles from the coast of Norfolk. Our largest border of *Habranthus* this year is 12 feet wide and has a south-east aspect. At the back is a wall 5 feet high, planted with Pear trees. The border starts 4 feet from the base of the wall. The bulbs are allowed to remain two years, when they are lifted and divided as soon as the foliage has ripened, which is about the end of June or early July, the small bulbs being planted by themselves to grow on to flowering size. The plants were very strong this year, and threw up flower-stems 18 inches to 2 feet high, with from five to nine flowers on each, seven being quite common. Last spring, before flowering, the plants withstood frosts up to 22°.

The original bulbs in these gardens were given to my grandfather by the late Rev. Nelson of Aldborough forty years ago, and his advice was to plant them in a warm position 10 inches to 12 inches apart and leave them undisturbed. There are several other gardens in this district where *Habranthus pratensis* is flourishing, the bulbs being distributed from the same source. This autumn we are planting *Habranthus* in beds quite in the open, as last season we had some small bulbs planted to grow on in beds fully exposed, and they did as well as could be desired. It would seem that this beautiful subject is more hardy than is generally supposed. Perhaps these few notes may induce others to try this plant, which well repays any labour expended on it. I may add that last May we had over eight hundred spikes, which, with their vivid colouring, made a display not easily forgotten.

E. G. DAVISON.

Westwick Gardens, Norwich, Norfolk.

PREPARING NEW BEDS FOR ROSES.

IF one would have good Roses, he must grow them in his heart." The late Dean Hole was not far wrong when he made the above remark, and it is true that if one possesses a real love for the flower, he will see to it that good soil is prepared for the plants. I am afraid many amateurs are very often induced to go to unnecessary expense in purchasing special soil from a distance, when perhaps their own soil is good enough. If one possesses a light, sandy soil, then by all means add some loam and, if possible, pulverised clay, and also a liberal amount of good cow and pig manure. Roses are gross feeders and require plenty of nourishment, and nothing can be better for them than natural manure.

If the soil happens to be a heavy clay, this needs well breaking up and some burnt earth added. Perhaps the ideal soil is such as this. We do not know the value of burnt earth, especially to blend with clay soils, and a cartload or two of this is a good investment. In preparing new beds or borders for Roses, do not be induced to add all sorts of compounds, such as leaf-soil, and be very chary of adding the various remedies for the extermination of insect pests. My own opinion of these is that the remedy is often worse than the disease. If there are insect pests, lay the soil out thinly and allow the birds to pick it over; and they will do this most thoroughly.

All beds or borders should be trenched 2 feet deep, and if of a light nature, trench 3 feet and add plenty of good cow-manure to the lower soil. My plan is to open a trench 3 feet wide and any convenient length. Take out a spadeful in depth all along the trench and also its width. Wheel this away to the end of the trench. Now shovel out the loosened soil and also wheel it away. Fork up the next layer with a good deep fork; then spread over 3 inches or 4 inches of good manure and fork the ground over again. Add 6oz. of basic slag to every square yard. This is best put on at the same time as the manure. Now mark out the second trench and dig the top soil into trench No. 1. Shovel out the loose soil, and trench No. 1 is finished. If any soil is to be added, this can be done as the work of turning over is carried out. Should there be Roses in the borders that one does not wish disturbed, it is very easy to avoid these as the trenching proceeds; but it is far better to dig as much of the soil as possible, rather than adopt the very bad plan of just opening holes wherever a Rose is to be planted.

For ramblers and standard Roses that are to be isolated, also for weeping Roses, good large holes should be dug out fully 3 feet deep, and as much in width and length. One important detail, viz., drainage, must not be overlooked. Roses abhor a water-logged soil. If the drainage is not free, artificial means should be adopted to make it so, and a few inches of large stones, clinkers or brickbats, placed 3 feet deep, will generally effect our purpose, providing a fall is made for the superfluous water.

Perhaps the greatest enemy of the villa gardener is the unskilled jobbing man, who will not prepare the soil properly for the Roses he has to plant. I would strongly urge upon all amateurs to see that the soil is well broken up to a depth of 30 inches at least; then one may expect good results, providing sound well-rooted plants are set cut.

DANECROFT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Crown Imperials (*Fritillaria imperialis*) are fine subjects for the borders and give their stately drooping flowers early. A good rich soil is suited to their requirements, and before planting, which may be carried out now at any time, see that the position they are to occupy is liberally treated with decayed farmyard manure. There is a variegated variety which is also very effective.

Leucojum aestivum, or the Summer Snowflake, may be planted in the borders or elsewhere, and will give a display of its Snowdrop-like, but larger, flowers during summer. Being perfectly hardy, it is no trouble. Plant about three inches below the surface.

Calceolaria alba.—This is an interesting and pretty plant for the borders and front of the shrubberies, but, unfortunately, none too hardy. A few cuttings taken now and wintered in a cold frame will ensure the plant being perpetuated next year in the event of the old plants succumbing.

Senecio glastifolius.—This, too, is a grand subject for late summer and autumn blooming, and an exceptionally free grower, producing showy flowers of much value for vase and table decoration. In a mild winter the plants will pass through it unharmed, but either a little seed should be reserved or cuttings taken as advised for the above.

Cape Figwort (*Phygelius capensis*).—This plant has been very effective this season, flowering profusely. Cuttings will root readily, and, if not already taken, should be secured at once. In warm localities it forms quite a large bush, but is never absolutely safe from frosts. With us it only makes an annual growth, and with the protection of some cinder-ashes round the base we generally manage to keep it. It also makes a fine subject planted against a wall in a sheltered position.

The Rock Garden.

Protecting Plants from Rains.—There are several subjects which are liable to be lost if exposed throughout the winter months to continued rains, and therefore some device should be used so that a sheet of glass of sufficient size can be raised above the plant and held secure in a slightly slanting position. There are various methods. Some people prefer a wire support, or even four wooden sticks with wire to go over the glass will suffice; but the arrangement should be simple and one where the glass can be easily detached and the frame stored away when not needed.

Labelling.—This, when done, should always be as neat as possible, but in many gardens it does not receive the attention it deserves when one considers the educational value to be gained. Small metal labels, stamped with a set of small letters, are cheap and lasting, as well as neat, and should, wherever possible, be placed just in front of the plants. Now that many plants are losing their growth, care should be taken that they are not disturbed, and here again the value of a label becomes apparent.

Plants Under Glass

Nerine Fothergillii.—This is a fine bulbous plant for autumn flowering in the greenhouse, and the cultural requirements are not very exacting. Nernes should not be disturbed oftener than is necessary, and unless the stock is wanted to be increased, leave them alone. While making their growth give plenty of water and manual assistance, and when thoroughly hardened off expose during the summer months to full sun and keep dry. This treatment, generally speaking, applies to all such Cape bulbous plants.

Gloriosa superba.—This attractive stove climber will, in most cases, be completing its growth, and as soon as it exhibits signs of yellowness it should be taken down from the rafters and tied to one or two sticks, water being gradually withheld from the plant, finally turning it on its side in a warm house to rest during the winter months.

Paneratiums.—When these have flowered, the plants should again be returned to a warmer house, and if any attention as regards potting is required, this may be given. Water newly-potted plants very carefully. Use a mixture of good turfy loam,

peat and leaf-mould, with the addition of charcoal and sand, using clean, well-drained pots.

Fruits Under Glass.

The Early Vinery.—With Vines that are started into growth before the close of the old year, it is absolutely necessary that they, as with all others, should have a season of rest, and during their resting period they should be exposed to all the air and, as far as is possible, a dry atmosphere. Often-times these houses have to accommodate flowering plants, but avoid the introduction of any that are affected with mealy bug, if possible.

Tomatoes.—To successfully grow Tomatoes through the autumn and winter months requires extra care and attention, and unless one has the benefit of a pit or house with a little fire-heat, they are best left alone. As much light as possible is requisite for their well-being; therefore a house in a suitable site and thoroughly clean should be chosen for them. A circulation of air whenever possible, with just enough fire-heat to maintain a buoyant atmosphere, careful watering, together with keeping the floor and surroundings dry, will help towards having them in a healthy condition. Keep the growth trained near to the glass and give a little top-dressing occasionally. Just a sprinkling of fine soil, with some fertiliser mixed with it, will stimulate root action.

The Kitchen Garden.

Chicory.—This is easily forced, and is so valuable for salads that a little may be started into growth as soon as one cares for it. The old growth should be twisted off and five or six roots placed in a large pot, placing soil or old Mushroom-bed material among them. Give a thorough soaking of water, and keep dark either in the Mushroom-house or by means of an inverted pot.

Rhubarb.—As the foliage dies down on the beds it should be cleared away, also any weeds or other refuse, the ground afterwards lightly forked up, and a dressing of decayed manure applied. Where early-forced Rhubarb is in demand, a few roots should be lifted and allowed to lie on the ground for a few days, and then taken into the Mushroom-house and kept moist, or they may be placed under the stage in a warm house and covered in.

E. BECKETT, V.M.H.

Aldenham House Gardens, Eistree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Gladiolus.—Corms of the many sections may be lifted at any time after this, preserving some soil about the roots and all the little bulbs which are useful to increase stock. Lay them meanwhile in a perfectly cool structure where they are safe from frost. The present year's seedlings and young plants generally should have a 3-inch or 4-inch layer of soil spread evenly over the beds as a protection from hard frost.

Tuberous Begonias.—By covering at night these are sometimes preserved till the last. This year, however, the early frost in September seriously crippled the plants, and, as a rule, they will now be quite ready to lift. I leave some soil attached to the tubers, dry them in a covered outhouse or vinery, and then store them in boxes till spring. If carefully lifted and the carpeting material is still looking well, the beds, after tidying up, will be presentable for a few weeks longer.

Propagating Hardy Flowers.—The latest batch of cuttings of Pansies and Snapdragons should be put in forthwith. Some growers take cuttings of Carnations of the Raby Castle and Countess of Fife types and plant them in cold frames, where they form roots before spring is much advanced. Where possible, it is preferable to root them in sand in a propagating-pit, boxing them off when ready and growing coolly, far superior plants being the result.

Phloxes.—These, with few exceptions, will now have finished flowering, and where they are massed by themselves they may now be lifted, divided and replanted. Young plants are, of course, much to be preferred, but by selecting the outer portions of the clumps, perfectly satisfactory results are obtained. I would like to replant Phloxes annually, but have to be content with only some special varieties. The Phlox is a surface

rooter, and even if the ground is trenched, the greater part of the manure they must be allowed should not be buried deeply. To get a mass of blooms, the plants should be not more than a foot apart.

The Bog Garden.

Saxifraga Andrewsii.—This pretty species flowers at this time, and is almost the only plant in bloom. It should be raised above the water-line to be moist but not wet.

Meconopsis.—The foliage of *M. integrifolia* is very handsome if the plant is grown in the same way, and those who have a stock in pots might try some planted thus, that is where the natural soil is too light and porous to suit them.

General Work.—Quite a number of plants will now be past, and the stems should be cleared off—Liliums, for instance—and the decaying foliage of Arrow-heads, Water Plantains, &c., taken away. Forget-me-nots which have overrun their positions should be cut back, and, to finish all, a thin layer of rotted manure and soil be evenly distributed all over the soil where exposed.

The Plant-Houses.

Perpetual-flowering Carnations.—As many cuttings as can be secured should now be taken and rooted in sand in the propagating-pit. January cuttings may be preferred in the South, but autumn-struck cuttings certainly produce the better plants in the North. The cuttings themselves are of better quality, and the young plants are sufficiently forward by the end of January to go on with the advancing light and heat. Plants full of flower and buds in beds outside may be lifted and potted for present decorative purposes.

Heaths.—These are usually purchased at this season, and are sometimes allowed to get so dry at the root as to last only a short time. Much depends on the kind of structure in which they are placed, but the soil should be always kept moist, else the fine roots die and the plant follows. Much the same treatment is desirable for *Epacris*, but the plants are less susceptible to harm from occasional soil dryness.

Euphorbia fulgens.—This gloriously-coloured old flower should now be well forward, and growth should not be so much striven for as consolidation, so that as long sprays as possible may be flowered. The plants need only a temperature of 50° to 60°, and must not be overwatered in the meantime. Once the flower-buds are formed, occasional slight applications of sulphate of ammonia will deepen the scarlet.

Maidenhair Ferns.—These need to be merely kept in a frost-proof house through the winter, the fronds, if no damp is permitted, standing much better than if kept in a warm structure, and the new growths are much stronger in spring. Small plants will need to be watered with care, else, if too dry at the root, the fronds will wither. Large plants, on the other hand, will stand for weeks without water at the root.

The Vegetable Garden.

Tomatoes for spring fruiting should be repotted to stand over the winter, using a rather light compost. The plants should not be placed in too much heat, else they will not fruit, and must be kept rather dry at the root.

Celery.—Rust has been rather bad in this locality, and the crop consequently shortened. Repeated dustings with flowers of sulphur hindered its extension here. Before late rains soil should be placed well up the stems of the latest batch, finishing off the trenches two or three weeks hence when the soil has become somewhat settled.

Peas.—The full pods should be regularly picked off and kept for use in a cool place. The reason for this is lest frost should destroy the crop, which, if treated as above, will usually afford pods for a fortnight or so after the plants are killed.

Artichokes.—Cut over the stems of Jerusalem Artichokes 6 inches or 9 inches from the ground. The roots in the meantime will be the easier to raise, and the stems after this are no use to the crop. Strongly-grown Globe Artichokes are still producing small heads, and, like Pea pods, must not be allowed to remain on the plants to be frosted. It is worth while to detach suckers from the old plants and lay them in among coal-cinders or sand to be planted out in spring.

R. P. BROTHERSTON.

Tynningame, Prestonkirk, N.B.

**ANSWERS
TO CORRESPONDENTS.**

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

TO SOW FERN SPORES ON A WALL (Avonbrook).—As your wall is new, it is probable that you would do better to defer the sowing until spring. We presume that there are moderately wide crevices between the stones or bricks. That being so, it would be a good plan to take away a little of the mortar and insert a small piece of fibrous peat and a few chips of soft stone or brick. On the surface sow the spores during moist weather, but take care that the places where the spores are sown are so arranged that a heavy storm will not wash them off. If you have plenty of spores, a few might be sown now, and the remainder stored in envelopes or bottles in a cool place until spring. Another way in which you might deal with the wall is to sow the spores in pots or pans made up of sterilised soil, placing them in a cold frame. When the green, moss-like growth of the first stage in the Fern's life-history is fairly well advanced, remove it in small patches and introduce it to crevices in the wall during moist weather. Should drying winds be experienced after the completion of the work, it would be a good plan to moisten the wall several times a day.

ROSE GARDEN.

GRASS AN TEPLITZ BADLY MILDEWED (X).—We think you would do well to cut away the badly-mildewed parts. All affected growths and foliage should be burnt at once to prevent the spread of disease. We should advise a good spraying after the cutting has been done, using either Cyllin Soft Soap or V2 K Fluid. Either of these applied with a fine sprayer, and repeated at intervals of three or four days, will keep mildew in abeyance.

MANURES FOR ROSES (A. N.).—As you are unable to obtain sufficient stable or cow manure for your Rose beds, we do not think you can do better than use Wakeley's Hop Manure. This is composed of spent Hops treated with chemicals, and, in addition to supplying plant food, adds humus to the soil. For this reason it is a good substitute for natural manure. It can be dug into the soil when new beds are being prepared, and can also be lightly worked in between established bushes.

SWEET BRIAR HEDGE (K. D.).—A Sweet Briar hedge would be a very nice addition to the old-fashioned garden, and this plant will grow almost anywhere, certainly in the North of Ireland. The plants are procurable from any of the well-known Rose nurserymen who advertise in our columns, and usually they cost about 20s. to 25s. per hundred; or you can obtain extra strong plants at an advanced price. Plant the Sweet Briars in November, and see that the soil is dug 2 feet deep and 1 yard in width for a single row of plants, setting them about eighteen inches apart. The walks should be about three feet wide.

FRUIT GARDEN.

PEAR MIDGE (G. P.).—The trouble is not due to the frost, but the fruits are attacked by the Pear midge (*Diphysa pyri*), to which we have referred several times recently. It is too late to collect the fruits now; it should have been done some time ago.

BLACK CURRANTS (R. B.).—The Black Currants were not in any way attacked by insects or fungi. The probable explanation of the trouble with them is that they had become dry, and that, with the water supply suddenly given, the interior swelled more quickly than the skin could keep up with. They were abnormally full of seeds, and this may account for some of the cracking, for the pulpy part of the Black Currant consists largely of the much-swollen testas of the seeds.

PEAR LEAF-BLISTER (H. M. B.).—The leaves of the Pear are attacked by the Pear leaf-blistery mite. The pest appears to have been spreading rapidly during the last few years, and it is the cause of considerable damage when numerous. The mites hibernate in colonies of several individuals under the scales of the buds, and, as soon as the leaves begin to develop in the spring, the mites enter them through the several openings, and their presence causes the production of a small reddish gall. If many mites attack a leaf, it frequently happens that the leaf falls

long before it ought to do so. The female lays a few eggs inside the gall and, after hatching, the young mites make their way to other leaves, which they enter, or may even enter fresh places on the same leaf, galls developing as before. There are several broods in a year, and the mite spreads with each one of them. About September the young mites make their way to the winter buds, there to pass the cold season. All young nursery stock, if there is any fear of it being infested with the mite, should be fumigated with hydrocyanic acid gas, and older stock should be sprayed while it is dormant with the Oregon Winter Wash, made by mixing 3lb. of quicklime and 1lb. of caustic soda together, and slake with hot water in which 3lb. of flowers of sulphur have been well stirred. Stir the mixture and add 3lb. of common salt. Allow to boil for some time, then add water to make up to ten gallons. At about the end of May or in June, perhaps some good might be done by spraying with paraffin emulsion or with a nicotine wash.

MISCELLANEOUS.

INSECTS EATING LEAVES AND CROWNS OF WATER LILIES (G. W., Surrey).—The only thing we can suggest is that you have the pond thoroughly cleaned out next winter, removing all mud, soil and plants. Then make up beds of new soil and plant a fresh lot of Water Lilies. When once a pond and the plants become badly infested with such a pest, there is little use in trying to combat it by the use of insecticides, for what would kill the insects would be likely to kill the plants also.

LARVÆ FOR IDENTIFICATION (M. M. E.).—The grub sent is one of those known as surface caterpillars, and is apparently that of the Turnip moth (*Agrotis segetum*). There are several species with similar habits, burrowing into the ground during daylight and feeding on a variety of plants during the night. The best method of dealing with them, since no poison can with safety be used upon Lettuce, is to hand-pick them. Searching round the plants attacked to 2 inches down will not fail to reveal the pests if they are present. They are easily killed, and instantaneously, by dropping them into boiling water or paraffin.

INSECT PESTS (Miss K. D.).—Earwigs are sometimes very annoying, and occasionally troublesome. They are not without redeeming features, however, for they are carnivorous and devour some kinds of noxious insects. Where they are very numerous, they may be trapped by putting inverted pots with a little hay or straw near their haunts. They will seek refuge in the pots, and the latter may be examined daily and the earwigs shaken into hot water, or water in which a layer of paraffin is floating. Another good trap, used in a similar way, is furnished by dry Bean-stalks. They will creep into any dark crevice, and occasionally, but very rarely, get into the ears of people; but this is very rare indeed, and must be very uncomfortable for the earwig. Woodlice are best caught by putting hollowed-out pieces of Potato, hollow side downwards, near their haunts. These should be examined from day to day.

NAMES OF PLANTS.—Amateur.—1, *Phyllanthus* species; 2, *Tropeolum tuberosum*; 3, *Oenothera speciosa rosea*; 4, *Erigeron multiradiatus*; 5, *Geum chilense minutum*; 6, *Calyceanthus occidentalis*; 7, *Erigeron philadelphicus*; 8, *Sisyrinchium angustifolium*; 9, *Cistus*, probably *C. corbariensis*; 10, *Veronica Hectori*; 11, *Rose*, variety not known; 12, *Spiraea discolor*; 13, *Menziesii triuphans*; 14, *Spiraea* species, flowers required for identification; 15, *Cistus villosus*; 16, *Aralia chinensis canescens*; 17, *Acaanthus mollis*; 18, *Cornus alba Spæthii*; 19, *Echeveria* species; 20, *R. A.*—1, *Iuula eusifolia*; 2, *Serratula* species; 3, not recognised; 4, *Aster Linosyris*.—*Thornton-le-dale.*—*Lonicera sempervirens* (the North American Honeysuckle).—*N. N.*—1, *Juglans nigra* (Black Walnut); 2, *Juglans regia* (common Walnut).—*F. Dean, New Southgate.*—Yellow flower, *Statice Boudoulli*; blue flower, *Statice sinuata.*—*Jasom.*—*Sparmannia africana* (the African Hemp).—*D. M. M.*—*Chrysanthemum segetum* (Corn Marigold).—*Mrs. A. T. Ferris.*—We believe the Rose to be the Hybrid *Polyantha floribunda.*—*F. Lurani.*—*Rosa indica sanguinea.*

NAMES OF FRUIT.—C. A. R., Kent.—1 and 9, *Doyenné du Comice*, dessert; 2, *Beurré Hardy*, dessert; 3, *Beurré d'Anjou*, dessert; 4 and 6, *Brown Beurré*, dessert; 5, *Cox's Orange Pippin*, dessert; 7, *Baronne de Melo*, dessert. There was no No. 8. We cannot undertake to return samples.—*W. M., Chiswick.*—Yes; *Beauty of Kent.*—*Mrs. C., Hants.*—The same Apple is known in this country as *Emily Childs.*—*Mrs. V. G. K., Dorset.*—Apple *Gravenstein*, the true variety.—*Mrs. G., Oxford.*—1, *Catillac*; 2, *Marie Louise*; 3, *Urbaniste.*—*Perplexed.*—*Beurré Hardy.*—*A. R. L., Hants.*—1, *Striped Beaufin*; 2, *Durondeau*; 3, *General Todleben.*—*R. G.*—1, *Marie Louise*; 2, *Beurré Hardy*; 3, *Gansel's Bergamot*; 4, *Beurré Clairgeau*; 5, *Swan's Egg*; 6, too poor to name; 7, *Durondeau*; 8, *Bismarck*; 9, *Lady Henniker*; 10, *Hawthornden*; 11, *Yorkshire Beauty*; 12, *Wellington.*—*F. Clarke.*—The Apple you send is *Maltster*. It can be used for dessert or cooking. We hope you will subscribe to THE GARDEN regularly now.—*E. H.*—1, *Beurré Diel*; 2, arrived rotten; 3 and 6, *Marie Louise*; 4, *Beurré Superfin*; 5, *Pitnaston Duchess*; 7, *Doyenné du Comice*; 8, *Beurré d'Anjou*; 9, *Vicar of Winkfield*; 10 and 19, *Beurré Hardy*; 11, *Louise Bonne de Jersey*; 12, *Aspasie Aucourt*; 13, *Comte de Lamy*; 14, *General Todleben*; 15, *Bergamotte Espéren*; 16, *Duchesse de Angoulême*; 17, *Beurré Bachelier*; 18, *Doyenné Boussoch.*—*J. E. G. L., Chestow.*—*Pear Urbaniste.*—*Mrs W., Ipswich.*—1, *Jean van Geert*; 2, *Marie Louise*; 3, *Easter Beurré*; 4, *Apple Lady Henniker*. Nos. 2 and 3 are dessert, and No. 4 is used both for dessert and cooking.

SOCIETIES.

THE NATIONAL VEGETABLE SOCIETY.

The third annual exhibition in connection with the above society was held in the Clarendon Hall, Watford, on the 2nd inst. The Earl of Clarendon kindly opened the show, and in an excellent speech referred to the high quality of the exhibits and the good work which the society, in his opinion, were doing in bringing before the public vegetables of such high quality. Taken as a whole, the show was exceedingly good, and it is doubtful whether such a display has ever been seen anywhere in the United Kingdom so late in the year.

NON-COMPETITIVE EXHIBITS.

The Hon. Vicary Gibbs, Aldenhain House, Epsom (gardener, Mr. E. Beckett), showed a very beautiful and comprehensive collection of high-class vegetables. In addition to such kinds as Potatoes, Carrots, Leeks, Brussels-Sprouts, Onions and other ordinary vegetables, many of the rarer kinds were included, such, for instance, as *Salifly*, *Scorzoner*, *Celeriac*, *Capsicums*, *Aubergines* and *Kohl Rabi*. Needless to say, the whole of the vegetables were in the very pink of condition, and the staging was some of the best we have ever seen. We are indebted to Messrs. Sutton and Sons for the photograph of this exhibit, reproduced on page 524, all the vegetables included in it being grown from their seeds. Large gold medal.

Messrs. Doble and Co. had a beautiful collection of Potatoes, these being neatly staged in baskets on tiered staging. No fewer than fifty varieties were in the exhibit, these including *Improved Factor*, said to be a tremendous cropper; *Midlothian Early*, grown in Essex and Scotland respectively to show the difference of the skin texture in different soils; *White City* and the richly-coloured *Herd Laddie*. Silver-gilt medal.

The collection staged by Messrs. Barr and Sons, King Street, Covent Garden, was an exceedingly good one, and comprised a vast number of kinds, the whole being most artistically staged. Celery, Leeks, Cauliflowers, Beetroots, Onions, Lettuces, Carrots, Capsicums, Beans, Kohl Rabi and Potatoes were a few that called for special mention. Gold medal.

Messrs. Dickson and Robinson, Manchester, put up an attractive exhibit of their Premier Onion, a variety that has created considerable interest in various parts of the country. Silver medal.

Messrs. Gleeson and Co. of High Street, Watford, decorated the platform in a most artistic manner, tall Palms and other foliage plants being tastefully arranged on the main portion with beautiful examples of the florists' art, as well as a fine display of *Michaelmas Daisies* in the foreground. Gold medal.

Messrs. H. Lane and Sons, Berkhamstead, staged a large and representative collection of Apples, with some Pears and a few good dishes of Nuts. The large variety of Apples attracted much attention from visitors, who were able to see the best sorts for cultivation. Silver-gilt medal.

THE SOCIETY'S CLASSES.

In the premier class for twelve kinds of vegetables, the first prize was won by His Grace the Duke of Portland K.G. (gardener, Mr. J. Gibson), with a wonderful collection, in which the Carrots and Parsnips were exceptionally fine. Indeed, we doubt whether better have ever been seen. Second honours went to Mr. J. Hudson, Gimson Road, Leicester, his Onions and Cucumbers being of very high quality and the whole well staged. Third and fourth prizes were awarded respectively to W. H. Henderson, Esq., Serge Hill, King's Langley (gardener, Mr. F. L. Pike), and Messrs. Lobjoit and Son, Heston Farm, Hounslow.

In a similar class for nine kinds, distinct, first prize went to H. T. Tatham, Esq., Kendall Hall, Elstree (gardener, Mr. W. Gaiger). This exhibit was put up in a most attractive manner, the Carrots, Onions and Leek-calling for special praise. John Kerr, Esq., Rickmansworth (gardener, Mr. T. Avery), was a very good second, his Onions and Carrots being of particularly fine quality. C. H. Fritton, Esq., Grove Mill House, Watford (gardener, Mr. E. Woolf), was third.

For nine Tomatoes, one variety, quality and flavour to be the first consideration, there were eight entries, first honours going to Mr. J. Hudson, Leicester, for a fine dish of *New Emperor*. Second prize was won by the Duke of Portland, and third by Mrs. Denison, Little Gaddesden (gardener, Mr. A. G. Gentle).

For six Leeks there were three entries, first honours going to Mr. T. Jones, Raubon, for a fine half-dozen of *Champion*. Mr. J. Hudson of Leicester was a good second with the same variety, and Mr. T. Fellows, King's Langley, was placed third.

For a collection of six kinds of vegetables, distinct, to be grown by the competitor, open only to *bona-fide* cottage gardeners or allotment-holders in the county of Herts, there were nine entries, first prize going to Mr. W. Humphrey, Elstree, whose Cauliflowers, Onions and Celery were excellent. Mr. A. E. Dawes, Watford, was a good second. Third, fourth, fifth and sixth prizes were awarded respectively to Mr. H. Blake, Elstree; Mr. A. Madgwick, King's Langley; Mr. F. J. Gentle, King's Langley; and Mr. J. Day, Berkhamstead.

For nine Tomatoes the Rev. T. McMurdie was first with a superb dish, the whole being particularly well finished.

For six Red Intermediate Carrots there were no fewer than eleven entries, the first prize going to Mr. T. King, Bromham, Chippenham, for a wonderful half-dozen. Mrs. E. H. Denison was a close second, and Mr. J. White, Bampton, Oxford, third.

In a similar class for six Model Parsnips there were six entries, Mrs. E. H. Denison being a good first with

very high quality produce. Mr. J. White was second and the Rev. T. McMurdie third.

For six Long Crimson Beet, A. B. H. Goldsmidt, Esq., Mildenhall (gardener, Mr. T. Hatch), was first out of twelve competitors, second and third prizes going respectively to Mr. W. Humphreys, Elstree, and Mr. J. White, Bampton.

In Classes 1 to 10, prizes offered by Messrs. Barr and Sons, there was fairly good competition in most of them. For six Potatoes Scottish Chief, the first prize went to Mr. A. Evans, Radnorshire. Mr. J. White, Bampton, Oxford, was first for six Cabbages Little Queen; and Mr. K. Stannard, Panshanger, Herts, was first for six Cabbage Savoys Barr's New Cone-headed.

For six Stump-rooted Scarlet Carrots there were twelve entries. Mr. A. Evans, Radnorshire, being first with beautiful roots.

For six Crimson Globe Onions, H. T. Tatbam, Esq., was first, his bulbs being superb.

In Classes 11 to 21, prizes offered by Messrs. William Cuthbush and Son, competition was very good, particularly for Parsnips and Carrots. For six Onions, Mrs. E. H. Denison, Little Gaddesden, was a good first, the bulbs being large, yet of good quality. For six heads of Celery, Mr. W. Humphreys, Elstree, was a good first, Mrs. E. H. Denison and Miss Somers, Bushey, being second and third respectively.

Four entries were staged for six Leeks, the Rev. T. McMurdie, Weybridge (gardener, Mr. A. Basile), being

Birmingham, third. A similar number of dishes were staged in a class for Hercules Pea, Mr. T. Jones and the Rev. T. McMurdie being first and second respectively, third honours going to the Marquis of Northampton. For six Exhibition Leeks there were eight entries, the Rev. T. McMurdie being first with some splendidly-grown samples.

For a dish of Scarlet Runner Beans, Mrs. M. Knox was a good first, the Rev. T. McMurdie occupying a similar position for Giant French Beans. This gentleman was also first for Selected Alderman Peas with some particularly good produce. For three Marrows, Mrs. Denison was first, and Viscount Goschen received premier honours for a dish of Cartington Potatoes, there being ten entries, Miss Langworthy, Hollyport (gardener, Mr. T. J. Brown), was second, and Mr. E. Deakin, Hay Mills, Birmingham, third.

For six Perfection Intermediate Carrots no fewer than eleven exhibits were staged, Mrs. E. H. Denison being first with some remarkably good roots. Mr. W. Colman of Birmingham was a good second, and Mr. A. Evans, Radnorshire, third.

For six heads of Prize Pink Celery seven groups were staged, Miss Allead, Horsham (gardener, Mr. T. Sparkes), being placed first for some superb heads. The Rev. T. McMurdie was second, and Mrs. E. H. Denison third.

For six Market Favourite Beet there were thirteen entries, Mr. J. White, Bampton, Oxford, being first with particularly clean roots. The Marquis of Northampton was a good second, and the Right Hon. T. F. Halsey third,

Messrs. Clay and Son, Stratford, offered the prizes in Class 41 for six dishes of Potatoes, distinct. Mrs. Denison, Little Gaddesden (gardener, Mr. Gentle), took first place with the following varieties: Emperor, Royalty, King Edward VII., Excelsior, Snowball and Long-keeper. Mr. M. Hoad, Wellborough, Kent, was second; and the third place was taken by Viscount Goschen, Hawkhurst (gardener, Mr. J. Gilmour).

In Class 42 prizes were given by Messrs. Watkins and Simpson for the best collection of vegetables grown from their seeds. Messrs. Lohjoit and Son, Hounslow, were awarded the first prize for a very good exhibit.

In Classes 43 to 54 the prizes were offered by Robert Sydenham, Limited, Birmingham. In Class 43 some excellent collections of vegetables were staged, and the judges awarded the first prize to Mr. T. Jones, Ruabon, for an excellent exhibit which consisted of Autumn Giant Cauliflower, Ailsa Craig Onion, Up-to-date Potato, Dwarf Gem Brussels Sprouts, Hollow Crown Parsnip, St. Valery Carrot and Holmes' Supreme Tomato. The second award was given to Mr. J. White, Oxford.

Class 44, for eight distinct vegetables, was not so keenly contested as the previous class, but all entries were of excellent quality and were well staged. The first place was taken by Mr. E. Deakin, Birmingham, and the second by Messrs. Lohjoit and Son, Hounslow.

In Class 45 prizes were offered for the best eight Onions of one variety, and the premier award went to Mrs. Jenner, Wicmore Castle (gardener, Mr. W. Wheeler), for some excellent bulbs of Ailsa Craig.

In Class 46, for six Lyon Leeks, the first prize was awarded to the Rev. T. McMurdie, Woburn Park, Weybridge; and the second to Mr. E. Deakin, Birmingham.

The first award in Class 47, for eight Tomatoes, was given to Mr. E. Deakin, Birmingham, for a splendid dish of Holmes' Supreme. The second prize was won by Mr. J. White, Oxford, for a dish of Perfection.

Class 48, for three Cauliflowers, contained some excellent specimens, and the Rev. T. McMurdie of Weybridge (gardener, Mr. A. Basile) carried off the premier award for three splendid heads of Autumn Giant.

Class 49, for two dishes of Potatoes, was fairly well contested, and the first and second awards were given to R. H. Ling, Esq., Berkhamsted (gardener, Mr. D. Bedford), and the Rev. T. McMurdie, Weybridge (gardener, Mr. A. Basile), respectively.

In Class 50 competition was very keen, and the six heads of Celery for which the Rev. T. McMurdie was awarded the first prize deserve special mention. The variety shown was Bibby's Defiance. The second prize was won by Mr. T. Jones, Ruabon, with the same variety.

In Class 51 prizes were offered for eight Turnips. The first prize was won by R. H. Ling, Esq., Berkhamsted (gardener, Mr. D. Bedford).

Class 52 (six Parsnips) contained some splendid roots, and Mr. J. West, Oxford, carried off first honours for six almost perfect specimens.

In Class 53 (six Carrots) all the exhibits were of fine quality, and Mr. J. White, Oxford, took first place for some splendid roots of St. Valery; and Mr. T. King, Chippenham, was awarded the second prize for specimens of the same variety.

The quality of the exhibits in Class 54, for six Long Beet, was not so marked as in the two previous classes, but the first-prize exhibit awarded to Mr. E. Deakin consisted of excellent roots.

Messrs. J. K. King and Sons, Coggeshall, offered prizes in Class 56 for a collection of vegetables grown from their seed, and the second prize was given to Mr. G. Rickett, Croyley Green, the only exhibitor in this class, no first prize being awarded.

In Class 55 the prizes were offered by Messrs. Gleeson and Co., Watford, for a collection of vegetables grown from their seed. The first prize was awarded for an excellent exhibit to the Marquis of Northampton, Castle Ashby (gardener, Mr. A. R. Searle), and the second to H. T. Tatbam, Esq., Elstree (gardener, Mr. W. Gaiger).

The entries in Class 57 for three dishes were very numerous and the competition keen. The first prize was awarded to Mrs. E. H. Denison, Little Gaddesden, Herts (gardener, Mr. A. Gentle). The winning dishes consisted of Potatoes King Edward VII., Royalty and Snowball. Viscount Goschen, Hawkhurst (gardener, Mr. J. Gilmour), obtained the second prize. Prizes in this class were given by Messrs. H. Lane and Son, Great Berkhamsted.

The society's classes open to amateurs and cottagers only were 58 to 75.

Class 58 (six kinds of vegetables) was well contested, and Mr. H. Keep, Aldermaston, was awarded first prize for some splendid vegetables. Mr. W. Coleman, Buckingham, obtained second place.

In Class 59 prizes were offered for three kinds of vegetables. The first prize was taken by Mr. H. Andrews, Berkhamsted, with Cauliflower, Celery and Ailsa Craig Onion. Mr. C. King, Chippenham, was awarded the second prize.



THE NON-COMPETITIVE EXHIBIT OF VEGETABLES SHOWN BY THE HON. VICARY GIBBS AT THE NATIONAL VEGETABLE SOCIETY'S EXHIBITION.

first with beautiful produce. Mr. R. Staward, Panshanger, was second, and Mrs. M. Knox, Holt Hatch, Alton, Haunts, third.

In Classes 22 to 25, prizes offered by Messrs. Dickson, Brown and Tait, the entries were not quite up to the average. C. H. Fritton, Esq., Watford, was first for a truss of Tomatoes; Mr. T. Jones, Ruabon, first for two Cucumbers; the Marquis of Northampton, Castle Ashby (gardener, Mr. A. R. Searle), first for Cauliflowers with beautiful curds, and also for six heads of Celery, these being particularly fine.

In Classes 26 to 39, prizes offered by Messrs. Dickson and Robinson, the competition was very keen, particularly for Leeks, Carrots, Celery and Cauliflowers. For two bunches of Moneymaker Tomato, H. W. Henderson, Esq., King's Langley (gardener, Mr. F. L. Pike), was a good first with well-finished produce.

For six Premier Onions, J. Kerr, Esq., Rickmansworth (gardener, Mr. T. Avery), was first out of nine competitors; second and third prizes going respectively to Miss Jenner, Wenvoe Castle, Cardiff (gardener, Mr. H. Wheeler), and the Right Hon. T. F. Halsey, Hemel Hempstead (gardener, Mr. H. Folkes). The whole of the produce in this class was of exceptionally good quality. For thirty pods of New Lancastrian Pea there were seven exhibits, Mr. T. Jones, Ruabon, being first with splendid pods. The Rev. T. McMurdie was second, and Mr. W. Colman,

competition being very keen. Mr. W. Coleman, Buckingham, was first for a dish of Runner Beans, these being exceptionally good. J. Kerr, Esq., was placed second, and the Rev. T. McMurdie third.

The exhibits of Cabbage Lettuce Lord Kitchener were exceptionally fine, the first prize collection, staged by H. W. Henderson, Esq., King's Langley, being the best we have ever seen at this season. Mr. F. J. Gentle, King's Langley, was a good second, and the Rev. T. McMurdie third. For Standard Cauliflowers, Mr. W. Coleman, won in the order named, the whole of the produce being excellent.

For six Manchester Market Turnips, Mrs. E. H. Denison was first out of fourteen exhibitors, the roots being exceptionally clean and even. Mr. J. White was a good second with larger roots, and J. Kerr, Esq., third. Mrs. Denison was also first for six Selected Sugar-loaf Cabbages, J. Kerr, Esq., occupying a similar position for six Parsnips.

Competition was very keen in Class 40, in which prizes were offered by Mr. W. E. Sands, Ireland, for two dishes of Potatoes, one each of Erio's Queen and Irish Hero. W. H. Henderson, Esq., King's Langley (gardener, Mr. Pike), took the first prize; Mrs. E. H. Denison, Little Gaddesden (gardener, Mr. A. Gentle), the second; and the third was awarded to the Hon. Miss Plunkett, Dundalk, Ireland (gardener, Mr. R. Bloomer).

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

A Beautiful Rock Garden Sedum.—One of the most beautiful plants in the rock garden just now is *Sedum spurium splendens*. Its dwarf, spreading habit is admirably adapted for draping a large boulder, while its brilliant, almost carmine flower-trusses are very freely produced. Plants such as this, which flower at a time when the rock garden is all too dull, are particularly useful.

The "Temple" Show.—We understand on good authority that the spring show of the Royal Horticultural Society, which has for many years been held in the gardens of the Inner Temple, will next year be held in the Royal Hospital Grounds, Chelsea, where the great International Exhibition was held this year. For some years past the Temple Show has been much overcrowded, and the site at Chelsea will afford better scope for exhibitors to display their skill and allow visitors to see the show in comfort.

Some Interesting Cape Heaths.—At the meeting of the Royal Horticultural Society held on the 8th inst., considerable interest was manifested in a collection of Cape Heaths shown by Lady Grey. These were all cut sprays which had been shown at an exhibition of wild flowers held at Caledon, Cape Colony, on September 14, and were brought direct from there by Lady Grey. Several of the species were unknown to growers present at the meeting. At one time Cape Heaths were cultivated very largely in this country, but now well-grown examples are seldom met with.

Good Late-flowering Roses.—Although from 6° to 8° of frost had been registered for several mornings, and heavy fogs had existed for nearly a fortnight, the following Roses were blooming freely on the 14th inst. in an Essex garden: *Grüss* an *Teplitz*, *Gloire de Dijon*, *Frau Karl Druschki*, *Zephyrine Drouhin*, *Duchess of Wellington*, *Jas. Coey*, *Mrs. A. Munt*, *Konigin Carola*, *Margaret*, *Mme. Jules Gravereaux*, *Lady Alice Stanley*, *Mrs. Alfred Tate*, *La France de '98*, *Betty*, *Gustave Regis*, *Longworth Rambler*, *Margaret Molyneux*, *General Macarthur*, *Amateur Teyssier* and *Jessie*. All had really good, well-coloured blooms. *Jessie* has never been out of flower since the first week in July, and every young growth is covered with buds.

Stone Edgings to Flower Borders.—When visiting the gardens at Aldenham House, Elstree, a few weeks ago, we were interested to find that the flower borders which skirt the paths in the kitchen garden were edged with rough sandstone. This has taken the place of the grass edging that used to be there. The irregularly-shaped pieces of sandstone have been let into the soil, so that they are about six inches above the level of the pathway and form an edging some eighteen inches in width. Among the stones a number of the stronger-growing

alpines are planted, and the effect is most pleasing. The taller herbaceous plants are set well back, so that they do not overhang the alpine plants. In those gardens where a rock garden proper cannot be accommodated, a suitable home for a great many alpine plants could be constructed on the lines suggested.

Crocus pulchellus.—One of the most beautiful, although not the most showy, of the true *Crocuses* of autumn is *C. pulchellus*, which came into flower some days before September had run its course. It has delightful small flowers of a kind of pearl blue, though varying considerably in the precise tint. It succeeds well in the border close to the front, but its real place is in the grass or in a rock garden. It looks well in either of these positions, although it is less liable to injury on the rockery than anywhere else. *C. pulchellus* is quite hardy, and is an inexpensive bulb to purchase.

The British Fruit Show.—It is gratifying to know that in a year such as the present, when climatic conditions have been far from favourable, fruit-growers in this country are able to produce such magnificent examples of Apples, Pears, Grapes and other fruits as those staged at Vincent Square on Thursday and Friday of last week. The Royal Horticultural Society is doing good work in bringing exhibits of home-grown fruits before the public, but we think even more might be done in encouraging the grading and marketing of Apples. A detailed report of the show will be found on another page.

Campanula Hillside Gem.—There would appear to be a good deal of the *C. Hendersonii* blood in this plant, and despite its distinct habit, taller growth and differently-coloured flowers, among other things, the plant might well be compared to an improved *C. Hendersonii*. It would appear more generally amenable to cultivation than the last-named, while its profuse flowering—July to October—should render it welcome to all. Even now in the early days of October it is giving quite a passable display, and is one of the very few of its genus now in bloom. Eighteen inches or 20 inches high, the plants need no support, and an established clump is very showy.

A Brilliant Autumn Flower (Zauschneria californica).—For autumn flowering this is one of the most brilliantly-coloured flowers in the hardy plant garden, one worthy of appearing here and there in varied aspects so that a continued flowering may result. Not a lover of over-rich soils, it is a moot question whether some of the more brilliant effects of which the plant is capable are not the result of wall planting, that type of it more particularly where the roots may descend deeply in rubble and soil and still find a congenial home for years. A like result may be secured in the larger rock garden, where crag and crevice having been studiously made, the plants have also been equally studiously planted.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

"A Visit to Some Irish Rose Gardens."—In THE GARDEN for October 12, page 513, column 1, line 23, for "Colleen" read "Coronation." The latter, a seedling of Messrs. Hugh Dickson, Limited, is the Rose referred to.—J. H. PEMBERTON.

Rose Alberic Barbier.—As an almost continuous bloomer among the wichuraiana Roses, Alberic Barbier seems to bear the palm, and this season it has been in flower for many months and is still flowering away in the beginning of October here in the South of Scotland. It is very fine on a pillar with its creamy white, yellow-shaded flowers.—SUB ROSA.

The Loquat Fruiting in the Open.—In the gardens of E. A. Owgrom, Esq., of Culver, about five miles from Exeter, a Loquat tree (*Eriobotrya japonica*) has, growing under a south wall, borne

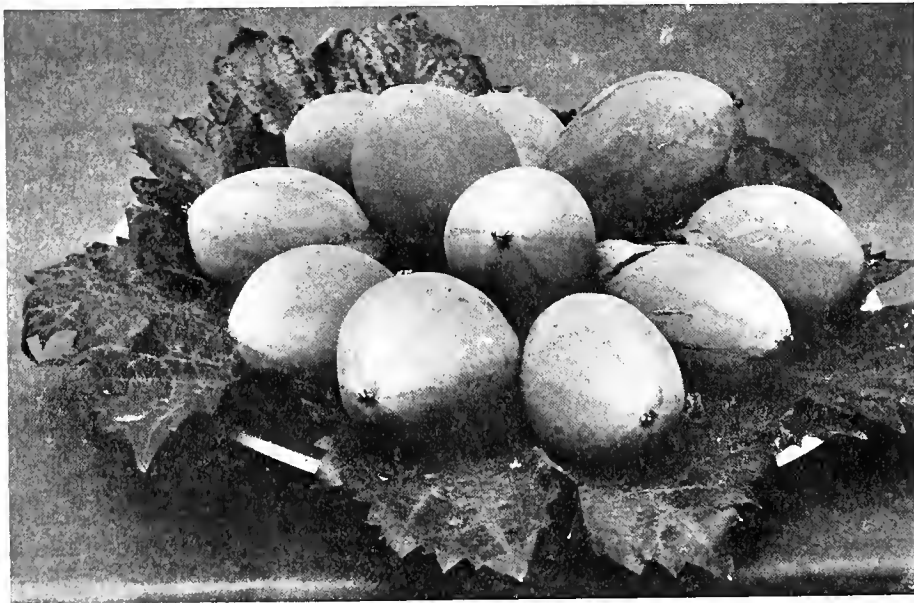
Rose Irish Fireflame.—A note by "Danecroft" in your issue of October 5, page 499, attracts my attention, and with your permission I should like to correct the slight error that occurs therein in the name of this Rose; and it is perhaps all the more important that it should be done early, as there is already another Rose in commerce bearing the name of Flame. Messrs. Alex. Dickson and Sons' latest single is called *Irisa Fireflame*, and not *Irish Flame*. The error, I think, crept in at the Southampton Show, where this beautiful Rose made its first appearance. It was unanimously awarded the gold medal of the National Rose Society, and proved the sensation of the show. I have Mr. George Dickson's authority for stating that the correct name is *Irish Fireflame*—*Fireflame* by name and *fire flame* by nature. Beautiful as *Irish Elegance* is, and entitled as it has been to be called the most beautiful of all single Roses, the new-comer, in my estimation, will eclipse it. It is dazzling in its brilliancy, gorgeous in its colour-scheme—that is not a pretty word, but I can think

of bone-meal and half-inch bones being added at planting-time. Just before the buds showed colour a dressing of Bentley's Rose Manure was hoed in, using a Sproughton hoe, a very necessary implement in successful Rose-growing. Sunburst is undoubtedly one of the "great" Roses.—E. E. F.

—Your correspondent Mr. Cook, page 499, issue October 5, advises disbudding and retaining side buds, and so avoid poorly-coloured blooms; but my experience is that the flowers are borne singly on stout stems. I understand that for early forcing under glass this Rose is a failure, and I believe time will show that it is as fickle in colour as W. A. Richardson. Lately I have seen a great number of blooms come pure blush. I am looking forward to your able correspondent Mr. Molyneux in his "Notes on Newer Roses" to say what we may expect of this beautiful Rose.—WEST WORTHING.

Flower Shows and the Judges.—It has long been a matter of surprise to me that while in practically all competitions the names of the judges, umpires, referees, examiners, or whatever title they are known by are publicly announced, the reverse holds good in the majority of flower shows, for it is in their case quite the exception to learn the names of the judges. In the report of the large provincial shows, at which heavy prizes are given, one frequently reads of the points allotted to different exhibits by the judges, but never a word as to the identity of those chosen to adjudicate on the merits of the various subjects. It would, I am sure, be to many as interesting to know the names of the judges as it is to learn other particulars connected with the show. Our own Royal Horticultural Society and the Manchester and North of England Orchid Society publish the names of the members of the different committees who are present at each meeting, hence one may readily learn who has adjudicated upon any particular exhibit; but in the case of most shows the identity of the judges is not disclosed, at least to the general public.—H. P.

Judging New Roses.—Your correspondent Mr. W. Easlea makes an admirable suggestion in his article on "Judging New Roses," page 517, issue October 12, viz., that the National Rose Society should have a trial ground of its own, to which all members should have access. I feel sure it would answer in every way if it were tried, and that it would not be a financial strain on the society, as no doubt it would be the means of increasing the membership considerably. It would be a great boon to be able to judge for one's self the various habits of growth of new Roses. Most people have not the time to rush about all over the kingdom to various nurseries to inspect them, and it is impossible to form any idea of the quality of plants from the descriptions in the catalogues, as the raisers naturally "boon" their own productions. Furthermore, I would suggest that novelties should be sent to the new trial ground, and that the raisers should not be allowed to enter them for a gold medal for two or three years until their qualities have been thoroughly tested and approved by the judges of the National Rose Society. Most of us want good garden Roses for bedding. I do not suppose 90 per cent. of the members of the society care twopenny about the "exhibition" qualities of the flowers, so that anything that can be done to encourage the raising of good garden Roses would be cordially welcome, and the first step in this direction would be to allow members of the society to judge for themselves of the individual merits of each novelty.—L. B., Surrey.



AN INTERESTING DISH OF THE WATER LEMON (*PASSIFLORA LAURIFOLIA*), SHOWN LAST WEEK BY MR. JAMES VERT OF AUDLEY END GARDENS, SAFFRON WALDEN, AT THE EXHIBITION OF BRITISH-GROWN FRUIT.

several branches with fine ripe fruits on them. It is rather rare for the Loquat to ripen its fruits in the open in this country, but Culver is a much-favoured spot in a climatically-favoured county.—ROBERT VEITCH AND SON.

Albino Forms of *Geranium robertianum*.—I was interested in reading the second paragraph in the second column of THE GARDEN for October 12, for only six weeks ago, when at Droitwich, my old College friend, Frederick Baynes (who in 1870 had "tubbed" me for the first Lady Margaret Boat, St. John's, Cambridge, then second on the river, and Goldie at the stroke oar), sent his motor to bring me to his house at Summerhill, Kilderminster, and there in his old-fashioned garden I saw under the trees in the shrubbery the albino *Geranium robertianum* flowering freely in a comparatively wild state.—P. CLEMENTI-SMITH.

—An albino form of *Geranium robertianum* is to be found in the district between Southampton Water and Beaulieu. It is quite wild, and, I believe, established there.—C. AGNES ROOPER.

of no other that so fittingly describes this genus among Roses. Unfortunately, Messrs. Dickson do not hold a large enough stock to enable them to send it out this year, but they hope to put it on the market in 1913.—HERBERT E. MOLYNEUX, Southampton.

Rose Sunburst.—"G. T. W.," page 474, issue September 21, has been unfortunate in his experience of this variety. If he will pinch off the first buds as soon as they are formed, he will then have blooms of the intense apricot and orange shade so attractive. My plants have been superb, having freedom of growth and perfect blooms of the desired colour. If "G. T. W." will give it another trial, I am sure he will be pleased. I have known Sunburst for some time, and have not the slightest hesitation in saying it is the finest of its colour ever sent out by M. Pernet-Ducher, superb and useful for any purpose, and very fine under glass. The ground in which Sunburst has done so well was deeply trenched and enriched with good farmyard manure and basic slag, a mixture

A First-prize Basket of Flowers.—I am enclosing a photograph I have taken of a basket of flowers arranged by my daughter, Miss M. H. Ledgard, which won the first prize at Thorne Flower Show on August 14.—ARMITAGE LEDGARD, *The Manor House, Thorne, Yorks.*

Collarette Dahlia Queen Mary.—This is one of the finest of the new Collarette Dahlias, and a set of such beauty of colour and form as this would do much to popularise the Collarette varieties. It is one of the varieties which blooms freely and throws up its flowers well, instead of hiding them, as is too often the case with this type of Dahlia. The blooms are of a fine shade of bright rose, with a white disc and prettily tipped with white. The collar is a pleasing blush, the whole flower having a very beautiful effect. It has been honoured with awards, but its merit of a good habit is not so well known as it should be.—A. M. D.

Buddleia asiatica in Scotland.—This handsome Buddleia is highly appreciated in the gardens of Drumlanrig Castle, where it is cultivated on the walls of a temperate house. It is very handsome with its pleasing whitish foliage and its racemes of white flowers. It is but seldom seen, and it is an interesting question whether it may not prove hardy in the milder parts of the country. Should it do so, it would be an excellent companion to *B. variabilis* and *B. Colvillei*. It is said in some books to reach to only 3 feet high, but at Drumlanrig on a wall it is 10 feet or 12 feet in height against the back wall of a lean-to house. Mr. Inglis grows it well.—VISITOR.

Choisya ternata.—I notice with pleasure the increasing interest of garden-lovers in that beautiful shrub, *Choisya ternata*. I have grown it now for over ten years. For some reason or other best known to itself, it took over two years before it flowered properly, but now and for some years past it has never failed. I find it perfectly hardy in every situation. It has gone through 30° of frost practically without showing any signs of discomfort beyond getting the tips of its leaves pinched. I have it planted in clumps and isolated bushes and as hedges, and everywhere it responds to whatever attention it gets. It does not seem to be at all particular as to soil, but it flowers better on a south border. Cuttings on a north border began to flower at a very early age. I do not think I have had a single failure in rooting it. I root cuttings regularly every year, and I find that it is a most acceptable present to my gardening friends when I present them with a well-grown bush of my own striking. I do not know whether it had reached England in Keat's time, but I believe he must have meant the *Choisya* when he wrote "A thing of beauty is a joy for ever."—GUY CAMPBELL, *Thames Ditton.*

FORTHCOMING EVENTS.

October 21.—National Chrysanthemum Society's Executive and Floral Committee's Meeting.

October 22.—Royal Horticultural Society's Meeting and Exhibition. Lecture at 3 p.m. by the Rev. Professor G. Henslow, V.M.H., on "The Senses of Plants."

October 23.—Herefordshire Fruit, Root and Chrysanthemum Show (two days). Croydon Chrysanthemum Show (two days).

TREES AND SHRUBS.

THE CARE OF OLD TREES.

IF we are to judge from the neglected appearance of old trees in many gardens, the fact that a little timely attention would, in many cases, prolong their lives for an indefinite period does not appear to be generally recognised. Yet in some instances the preservation of such trees is absolutely necessary to maintain the privacy and charm of the garden, for their death may let in views of ugly buildings and other objectionable features. There are favourite trees, too, which people would regret to lose, whose lives might have many years added to them were they only taken in hand in time.

As a rule, injury to branch, trunk or root is the initial cause of decay. By these injuries spores

by some fungus disease, there is little chance of saving the tree. Sometimes, however, a decayed section of trunk may be noticed near the ground-line, which, if dealt with at once, may hold the disease in check. In such cases the bark should be cut away, together with any rotten wood, until living bark and wood is reached. Should the disease extend below ground, remove the soil and cut away any dead wood found about the base of the trunk or roots. The wounds must then be painted over with a strong carbolic acid solution, and, when dry, with coal-tar. Two coats of the latter may be necessary. Such wounds are often due to very slight injuries in the first place, such as a blow from a mowing-machine, a sharp knock with some heavy instrument, frost-bite or sun-stroke, which, if attended to at once, would go no further. In the case of injured bark, it is always a good thing to cut the injured part away and paint the wound at once with coal-tar. Another fertile source of injury is the piling of soil, short grass or other material about the trunks. Sooner or later such a habit leads to disaster, and the most satisfactory trees are always those whose upper roots are quite close to the surface of the ground, which may be seen by the junction of trunk and roots rising clear of the ground. Root injury also occurs after the ground has been badly waterlogged. On heavy, low-lying ground this condition may sometimes be noted after an unusually wet winter, or after a stream has overflowed its banks. Unfortunately, the injury is so far advanced before it can be detected that there is little hope of saving the trees. All that can be done is to open drains round about them, and if the ground is covered with grass, remove the turf and fork the ground over lightly to let in as much air as possible. A long spell of drought may also have a bad effect on trees, especially old ones growing in rather poor soil. Fortunately, such cases are fairly easy to deal with, for short growth and flabby leafage usually indicate weakness and a shortage of water, and the necessary steps can be taken in time to prevent the death of the trees. In such cases the turf must be removed from beneath the branches to the full radius of the branch system, the ground afterwards being lightly forked over and thoroughly watered, finishing the work with a surface-dressing, 6 inches deep, of well-rotted manure and leaves.



FIRST-PRIZE BASKET OF FLOWERS SHOWN BY MISS LEDGARD AT A YORKSHIRE SHOW.

of various kinds of fungus find an entrance. The spread of disease is often facilitated by the age and general weakening of the health of the trees, and decay goes on unchecked until the owners suddenly observe that a tree is either unsafe or a large portion of it is dying. Branches broken by storms are a fertile source of permanent injury if attention is not paid to them at once, while injury caused to the surface of exposed roots by cart wheels, wheelbarrows and other things frequently account for the commencement of root trouble. There are, however, many instances where trees have become seriously damaged, but still retain a fair amount of vigour, which may be rejuvenated if they are only given the necessary attention, and the following notes are directed to a few methods of procedure.

Root Trouble.—This is the most difficult fault to deal with, and if the roots are badly attacked

Trees treated in this manner show a remarkable access of vigour the following year. Impoverished soil may also result in the weakened health of large trees. In the case of surface-rooting trees a layer of good soil and well-rotted manure may be applied as a surface-dressing after lightly forking the ground, taking care to carry the new soil to the outermost parts of the branches, for it must be remembered that the best feeding roots are found thereabouts. Deep-rooting trees and surface rooters also may be improved by opening a trench about the outer parts of the branches and forking the soil back towards the trees until fibrous roots are met with, then filling the trench with good soil.

Damaged Branches.—This may arise from a variety of causes. Damage by wind is one of the most common, for after a large limb has been blown away, the head of a tree is seriously weakened, and, if nothing is done, more branches follow.

To check this two courses of action are open. One is to reduce the weight of the remaining branches by removing a good-sized part of each, and the other is to link the branches to each other for mutual support. The latter may be done by placing iron collars round each branch and fastening them together with chains. Better still, however, is the method of boring a hole through each branch, inserting an iron bar between each two, and screwing it up tight at each end with nuts, iron plates 4 inches square being placed between the nuts and the bark. Dead tops of branches often occur also. Trees in this state are said to be "stag-headed," and they are very unsightly among other trees. They may be improved by cutting the dead parts out well below the place where the dead wood ends, taking care to tar all the wounds so made. While performing the work care must be taken to retain the natural outline of the tree, even if it means cutting away a branch or two which are apparently healthy. After a good topping such trees as Oaks, Elms, Poplars and Chestnuts often become quite healthy again, and last in good condition for many years.

Injury to Tree Trunks. —

Diseased areas on the trunks of trees may often be traced to branch injury in the first place. Branches may be blown out and the wounded places left unattended, or pruning may be improperly done and snags left behind, which in time decay and communicate disease to the trunk and eventually to the heart of the tree. It is not an uncommon question to be asked, "What can be done for trees with large or small holes in the trunk?" Providing the branch system is generally healthy, it is possible to patch up such a trunk in a manner that will prolong the life of the tree for many years. The first thing to do is to cut away as much dead wood as possible, then paint the bare surface with a solution of carbolic acid, afterwards applying a coat of tar. When this has had time to dry, the hollow or hollows must be built up with cement and bricks. A facing of cement must then be given to make the surface level with the surrounding bark, and this when dry may either be coated with tar or be coloured like the bark. Some people cover such wounds with zinc or lead, but it is a bad practice, for dirt and damp get beneath the covering and in time create more decay. Dead branches must always be removed quite close to the trunk, and the wounds so made be tarred over. There is really no special time for doing this class of work, but when living branches have to be removed, the best time is between June and Christmas. As a rule, it will be found a good plan to go round all important trees at least once a year and attend to any necessary pruning or touching up. Once the pruning is properly done, a little attention keeps the trees in good order.

W. D.

A FREE-FLOWERING WALL SHRUB.

(ABELIA GRANDIFLORA.)

As a wall shrub for early autumn effect there are few subjects to equal *Abelia grandiflora*. This *Abelia* produces a veritable shower of rosy white flowers at a time when the glory of most other flowering shrubs has departed. *Abelias* are not very extensively grown in the open. Only three species, viz., *A. rupestris*, *A. uniflora* and *A. floribunda*, appear to be known in the gardens of this country. *A. grandiflora* is a seedling of Italian origin, and is regarded as a form of *A. rupestris*. The flowers are considerably larger



ABELIA GRANDIFLORA, A BEAUTIFUL LATE AUTUMN-FLOWERING SHRUB FOR A SOUTH WALL.

than those of the type, and the whole plant is of more robust habit. When grown outdoors it requires a warm position; a wall facing south seems to suit it best. Although not fastidious as to soil, *Abelias* may almost be classed as peat-loving plants; a mixture of loam and peat in about equal parts will make the most suitable compost. In mild districts, such as the southern parts of England and in Ireland, *Abelias* are known to do remarkably well in open situations; but in northern and inland counties their culture should only be attempted where a south wall is at command.

THE HEATH GARDEN.

THE LING AND ITS VARIETIES.

THE Ling, or *Calluna vulgaris*, is so closely allied to the Heaths that many people make no distinction between the two genera. A careful examination, however, reveals the fact that there is a very different leaf arrangement, in addition to other botanical differences. In *Erica* the leaves are usually arranged rather loosely in whorls, while those of *Calluna* are closely packed together and disposed in such a manner as to give the stems a four-angled appearance.

There is only one species of *Calluna*, but it is prolific in varieties, which differ so widely from each other and from the type that, given a selection of the best, a varied and interesting feature can be produced. As is the case with most other shrubs which belong to the Heath family, the various varieties of *Calluna* are impatient of lime; therefore they ought not to be planted in places where lime is present in the soil to any appreciable extent. They thrive excellently in peat, although it is not essential to their well-being, for very good results can be obtained by planting in sandy loam. Propagation may be effected by means of cuttings or layers. The former is the better way, for the young plants are usually more vigorous than those raised from layers. The cuttings should be made from small side shoots during August or September, and be inserted in pots of sandy peat placed in a close frame, or in a bed of sandy peat under a hand-light.

When the different varieties are used singly to form masses or groups, they are very effective, but they make a charming picture also when the various kinds are mixed. A mixture of the better kinds was noticed a few years ago in the nursery of Messrs. James Smith and Sons at Darley Dale, and I was informed that quite a number of customers had been so pleased with it that they had repeated it in their own gardens.

The variable nature of the plant may be noticed sometimes on a wide stretch of moorland where it forms the principal vegetation, for it is possible to find clumps which differ considerably from the type. Thus in some places the branches may be 2 feet high, while in others they scarcely attain a height of 6 inches. Then, again, it is found in some places growing in dwarf, compact tufts 2 inches or 3 inches high, and in other places it is so dwarf as to resemble a close-grown moss. On the same hillside the colour of the flowers may be found to vary from the familiar light red of the commonest kind to white or dark red. The forms with white flowers are the more popular, and it pays to grow them on purpose for cut sprays.

Of late years a considerable trade has arisen in supplying white Ling, or white Heather as it is more often called, to the markets of various towns in Scotland during August and September. Quite recently an ingenious ruse was noticed in the London suburbs among itinerant flower-sellers with regard to a substitute for white Heather. Seed-bearing plants of a wild *Lepidium* had been collected and sprinkled with whitewash. From a superficial glance these bore a resemblance to Heather, and people were induced to part with their pennies quite readily. The branches of the Ling are sometimes used for thatching, especially for summer-houses and fruit-rooms. They are also used occasionally for litter for horses, and the young shoots are greedily eaten by grouse.

Of the many kinds in cultivation, the following may be accepted as a good selection: Alba, alba rigida, alba Serlei and Hammondii, strong-growing, white-flowered varieties; alba minor and alba pumila, dwarf-growing, white-flowered varieties; Alportii and rubra, strong-growing, red-flowered; rosea, rose-coloured; flore pleno, double red; aurea and caprea, golden and copper leaved respectively; Foxii, hypnoides, minima and pygmæa, dwarf, forming cushion-like masses of greenery, but not free-flowering. D.

THE ROSE GARDEN.

NOTES ON NEWER ROSES.

(Continued from page 519)

HYBRID TEAS.

IF new Hybrid Perpetuals are few and far between, the same cannot be said of the Hybrid Teas. Their number is legion, and the term "Hybrid Tea" is like charity, inasmuch as it covers a multitude of "Roses," most of them undoubtedly Hybrid Teas, but others might with more correctness, I fancy, be placed in other classes. The Hybrid Tea is the fashionable class at the moment, and so a Rose with any pretensions (sometimes, I am afraid, without any) to that term goes into the Hybrid Teas and is allowed to remain there. If it was a matter of serious moment, it would have to receive attention; as it is merely a label, and very often only an expression of opinion, it is not worth while going too deeply into the question, and at that I will leave it; but it is curious how Time has its revenges, for the old rosarian despised the Hybrid Tea class and refused for some time to recognise it. What would he say if he came back, I wonder? The rosarians' year-books make very interesting reading, especially some of the early numbers, and they have much to say on the Hybrid Teas; but that is another story that will keep. Among the newer Roses, the Hybrid Tea is much in evidence, and, dealing with those varieties that may be considered exhibition Roses first, I come to

Alice Lemon (Hill and Co., 1911).—This is an American-raised variety. Such plants as I have seen of it have been very promising, and the flowers quite up to exhibition standard. It was (particularly early in the season) frequently exhibited. Messrs. F. Cant had a really good flower of it at the Southampton Show that was at one time in

the running for the best Hybrid Tea, but it had eventually to make way for an extraordinary flower of St. Helena, another new Hybrid Tea. It has, of course, not yet had time to get into general cultivation, but I am convinced it is worth a trial and is not likely to disappoint. Its colour is bluish white, shading to a deeper centre. The flowers are well formed, seldom come a bad shape, and are of the desirable high-pointed pattern.

Andre Gamon (Pernet-Ducher, 1910).—This is a bright carmine colour, of good shape, but it needs to be shaded, as there are not too many petals. It should be useful in a cool season, and as it is now to be had at normal prices, it might tempt those of our exhibiting friends who like its colour. It is quite a good garden Rose, and in general appearance is not unlike Mrs. A. E. Coxhead, but without the fine shape of that variety.

Avoca (A. Dickson and Sons, 1907).—This Rose has done well this year in contradistinction to its

Rose he has yet raised. There is certainly a charm about it that is very taking. I have seen it described as a scented Frau Karl Druschki, but there is nothing Druschki-like about it. It has a much more refined appearance, and has undoubtedly a lot of Tea blood in its pedigree. The centre of the flower bears a strong resemblance to Catherine Mermet at its best, and the outside petals to La France. The buds have a slight blush "flush" on them, but this is lost in the open flower, which is a pure white. It was awarded the silver-gilt medal last year, but gained the premier award of the coveted gold medal at the last autumn show of the National Rose Society. (Was that because some of the judges had in the meantime seen it growing at Portadown, I wonder?) It is everybody's Rose, always in flower, standing the sun and the rain and the frost as well as any Rose I know, and its flowers always come good. I know the half-a-dozen rows that were growing at Portadown were hunted up



AUTUMN IN THE HEATH GARDEN. LING AND HEATHER EFFECTIVELY GROUPED.

last year's record, which was poor. It was well shown by trade and amateur alike, a box at the "National" shown by Dr. Pallett being very good, and he also won the medal for the best Hybrid Tea at the same show with a flower of this variety. Its fault is a tendency to make too much wood, so it is only in an early season that we see flowers of it in time for the shows. It is a good crimson-scarlet, and flowers of that colour are always wanted. It received the gold medal of the National Rose Society at the autumn show in 1907. One would call it a rather late-blooming variety, and as such it should be grown by all Southern exhibitors.

British Queen (S. McGredy and Son, 1912).—Ah! Has it come at last, the perfect white Rose? Form, fragrance, free-flowering, fine foliage—all of these are undoubtedly present in this beautiful variety. I believe Mr. McGredy calls it the finest

and down to find a bad flower or a split bloom, and although each plant was searched, it was *non est*, and there must have been thousands of flowers out. There are not many Roses of which this could truthfully be written. Anyone who saw it growing, as those who were fortunate enough to be able to visit the Portadown nurseries after the Belfast Show this year did, could not fail to be impressed with this Rose. That was in mid-July, and I noticed that Mr. W. J. Grant, who visited the nurseries in late September, writing in a contemporary, has formed the same high opinion of its future. It is undoubtedly one of the Roses of the year, useful for all purposes. The half-a-dozen plants that have been growing in my garden have created a sensation among my visitors.

Southampton.

HERBERT E. MOLYNEUX.

THE FLOWER GARDEN.

SIMPLE ARRANGEMENTS FOR SPRING BEDS AND BORDERS.

NOW IS THE TIME TO PLANT.

THE preparation of beds and borders for bulbs has so often been dealt with that it is not necessary to refer to it in detail now. Having prepared the beds, allow a few days to elapse before planting. It is advisable to have a definite idea and colour-scheme, thereby ensuring a pleasing result in the spring. The following arrangement has produced charming effects in both borders and beds, and can be recommended as one of the best results from the smallest possible outlay, and, furthermore, can be used annually with very little additional expenditure. The outside edge of the bed (which may be of any design) will be yellow with the sun-loving Crocuses. These, once planted, should remain undisturbed, as they do not interfere with the planting or growth of summer plants. So long as Crocuses grow and flower well it is a mistake to move them. The corms (or bulbs) should not be put into a hole made by a pointed dibbler, but should be pressed into a fairly solid base of soil and covered to a depth of 2 inches to 3 inches. The corms should be in two or three rows at a distance of 1 inch apart. This allows them ample room to increase year by year.

Following the Crocuses we have a belt of blue in the single dark blue bedding Hyacinths. These should be planted in the same manner as Crocuses, to a depth of 5 inches, but need to be about eight inches apart. Although the Crocuses bloom first, their foliage forms a pleasing surrounding for the rather sparsely-endowed foliaged Hyacinth. We have now advanced 6 inches inwards, and the next three additions, together with that of the centre, will supply the necessary foliage to relieve the dreary barrenness of the bed. The first belt is one of white in the *Viola Purity*, which is quite cheap and within the reach of all. Five inches or 6 inches behind it is *Royal Sovereign*, a deep yellow rayless variety of vigorous growth and very free-flowering. Further in another 6 inches, a belt of *Maggie Mott* or *Mauve Queen* gives a pleasing colour.

The centre, probably quite a large space, can first of all be filled with scarlet single Tulips, which should be planted as advised for Hyacinths, but about four inches deep, and the surface filled up with the double *Arabis alpina alba*. This is by far the most free-flowering and vigorous of this section of spring-flowering plants, and is very easy to propagate. Take a cutting as you would a *Geranium* cutting and insert it in the ground about three inches apart. The Tulips grow well above, and the scarlet contrasts vividly with the white

Stock-like blossoms of the *Arabis*, which in their mass give a slight pleasant perfume.

From early April to the end of May and into June the bed is "a thing of beauty," the *Violas* and *Arabis* keeping it gay with blossoms till the time is ripe for the transplanting of the summer occupants. *Myosotis* and *Silenes* may be used, but the effect is not so pleasing, and the extra trouble they entail in raising from seed, &c., does not recommend them when the beautiful double *Arabis* will flourish direct from cuttings. A pleasing variation is an edging of *Scillas*, a band of *Snowdrops*, followed by a belt of *Iris reticulata*, the white, yellow and mauve *Violas*, and, instead of the *Tulips*, *Horsfieldii* *Daffodils* towering over a carpet of the double white *Arabis*. The *Daffodils*

recommend others to try these flowers in like situations. Any free-flowering and strong-growing sort is amenable to this mode of culture. The variety *Robert Parker* is used with telling effect at Kew, and the dwarfier-growing Italian *Starwort* (*Aster Amellus bessarabicus*) is likewise seen to great advantage. These flowers have leapt into popular favour within the last few years. They are specially adapted to informal grouping, and impart touches of colour warmly appreciated at this season.

SOME CHOICE BULBS FOR PRESENT PLANTING.

THE charming personality of many bulbous plants is nowhere seen to greater advantage than under conditions nearly approximating to their natural habitat.

The bare ground that invariably results from the dense leafage of a Beech wood on the chalk may be transformed into a carpet of green and gold in January and February with the little *Winter Aconite*, so freely does this subject naturalise on this shallow soil that tens of thousands of seedlings can be counted each spring around the parent plants, and the majority of these eventually reach maturity.

Similar results may readily be attained with numbers of other bulbous plants. *Anemone apennina* is an instance. This lovely subject, with its starry blue flowers, is a sun-lover from Southern Europe, and revels in an open, sunny spot in garden or woodland where the soil is of moderate depth and other vegetation not too rank to choke it out. I have used it on the outskirts of Beech coverts and mixed woods of Spruce, Firs and hardwoods, and it is a revelation how rapidly the warty tubers increase. *Anemone blanda* is less vigorous, and is unable to compete with coarse woodland growth. It is a plant for the choice border or rock garden, succeeding in either an east or west aspect, and flowering during February and March, quite a month in advance of *A. apennina*. Selected forms of *A. nemerosa*, such as *Blue Bonnet* and *robinsoniana*, are also best grown under like conditions. The fleshy underground stems of these are exceedingly brittle, and must never be unduly exposed to the air like other bulbs.



AN AUTUMN WOODLAND SCENE: MICHAELMAS DAISIES GROUPED FOR EFFECT.

require planting at least 6 inches deep, and cannot be planted too early in September. S. W.

PERENNIAL ASTERS AS WOODLAND FLOWERS.

It seems almost incredible that the value of perennial Asters or Michaelmas Daisies for colour effect in the woodland should so long remain overlooked. There are few flowers that succeed under the shade of trees even in the height of summer, and there are certainly no plants at this season of the year to rival the Michaelmas Daisy for this purpose. At Kew these beautiful flowers are grown in large informal clumps and massed here and there in well-chosen spots throughout the woodland. The effect is most pleasing, and we unhesitatingly

Double and single *Snowdrops* (*Galanthus*) succeed under a great variety of conditions, and are always excellent in woodlands. The best flowers are produced from bulbs planted 4 inches to 5 inches deep, a rule that applies to most bulbs, *Crocus* excepted, as the latter succeed best about two inches in depth. *Galanthus Elwesii*, the giant form of *nivalis*, is not adapted for woodland planting unless the soil is of fair depth, but it attains its full development in good garden soil, and is most at home in borders or on the rock garden. The interval after *Scilla bifolia* flowers is occupied by the *Chionodoxas*, of which three varieties are admirably adapted for naturalising, namely, *Lucilia*, with rich blue flowers and white centre; *sardensis*, pure gentian blue flowers;

and gigantea, with large flowers of lavender blue. Greater attention might be given to Muscari at this season, as they require no special soil or attention, and when naturalised on grassy banks, beside walks, on rock gardens and similar positions they practically look after themselves. Heavenly Blue is the best variety for large effects, as it is both vigorous in growth and lasts long in flower. All the forms of Muscari botryoides and such species as comosum, neglectum, paradoxum and plumosum are admirable in short grass, while the large, fragrant Musk Hyacinth (*moschatatus majus*) should be specially accommodated on the rock garden.

Few bulbous plants yield richer effects or are more permanent in their results than Narcissi. A few Narcissi that succeed best in grass are obvallaris, spurius, moschatus of Haworth, pallidus præcox and scoticus. Several of these are species and natural hybrids, and do not readily accommodate themselves to cultivated ground. A choice Narcissus to grow in grass is W. P. Milner. It is a dwarf variety, with large, elegant, sulphur-coloured trumpets slightly pendulous in habit, while of somewhat similar habit is Johnstonii Queen of Spain, with lemon yellow trumpets of exquisite grace; indeed, it is one of the most beautiful of all Narcissi when grown in grass. The Poet's Narcissus also succeeds in grass. The bright red cups and snowy perianths form a most acceptable contrast to the general run of yellows, while their fragrance is not the least of their charms. THOMAS SMITH.

Coombe Court Gardens, Kingston Hill.

THE GREENHOUSE.

NOTES ON ORCHIDS.

COOL-HOUSE ODONTOGLOSSUMS.

THE **T**HE Odontoglossums are the most popular among cool-house Orchids, especially the variable *O. crispum*, which is always admired whenever seen on account

of its refined beauty and its usefulness as a decorative subject, either as button-holes, for arranging in vases, or when left on the plant.

There are both pure white and spotted forms, the first-named being held in high esteem by Orchid fanciers. Other species embrace *harryanum*, *Pescatorei*, *luteo-purpureum*, *Hallii* and *triumphans*, while the hybrids are almost legion. The various kinds of *O. crispum* have been employed by the hybridists, with grand results, while the same remarks apply to such as *Pescatorei* and *harryanum*. A few of the most attractive hybrids are *Rolfæ*, *ardentissimum*, *amabile*, *percultum* and *Phebe*.

Cultural Hints.—A suitable structure for Odontoglossums is one having a low span-roof, preferably running from north to south. Two stages are needed, one near the hot-water pipes, which is covered with finely-broken coke or shingle, and the other, usually a movable one, placed on bricks or inverted flower-pots, so as to bring the plants within the desired distance of the glass. This top stage can be made of ordinary wooden battens, left unpainted, when it retains the moisture for a much longer period. Both top and bottom ventilators must be provided, and a tank for

storing rain-water is essential, while, of course, roller blinds are a necessity, because all Odontoglossums—and Orchids in general—are shade-loving subjects. At one time it was the general rule to allow the temperature of the Odontoglossum-house to fall rather low during the winter months, but it has been proved that an average temperature of 55° to 60° Fahr. gives much better results. When the weather is frosty, however, a few degrees lower is less harmful to the inmates than excessive fire-heat. Throughout the greater part of the year a little air, both top and bottom, may be left on day and night, the exceptions being during very cold weather and when the division is vaporised for insect pests. A moist, buoyant atmosphere must be created by damping down the stages, floors and walls, say, twice or thrice each day, according to the elements outside; but in winter this must not be overdone, or the foliage may become disfigured and the tips decay.

decayed Oak leaves and sphagnum moss in equal parts. The whole is cut up fairly fine, all the dust is sifted out, and, when the ingredients are thoroughly mixed, it is ready for use. Ordinary flower-pots are selected and filled one-third of their depth with clean, broken potsherds for drainage. When the repotting operation is completed, the plants are arranged in a batch at the warmest end of the house, where they can receive special attention in regard to damping down and watering, for an overdose at this period would be detrimental to the future welfare of the plant. As growth and root action advances, the supply of water can be increased till the pseudo-bulbs are fully developed. After the completion of growth the amount of water necessary is naturally less, and at no time ought the plants to suffer from lack of moisture at the base to such an extent as to cause the bulbs to shrivel. Thrip is the worst insect enemy, but this can be kept in check by vaporising



DRY RETAINING WALL IN THE ITALIAN GARDEN AT GARSTON PARK, GODSTONE.

Repotting the Plants.—Where a quantity of Odontoglossums are grown, a few plants will need repotting at different periods of the year, but the largest number require attention in the latter part of August or early in September, while the collection is looked through again in February for any that were not quite ready, say, in September. Orchids are usually repotted when a fresh hatch of roots are seen at the base of the new growth, and with Odontoglossums they are apparent when it is from 3 inches to 4 inches high. Specimens in a healthy state may be moved into a pot two sizes larger without much disturbance beyond taking away a few of the useless back pseudo-bulbs and any sour soil. All examples are not in such a happy condition, and owing to some error in cultivation, such as over-watering, have lost their roots. When this is the case, a smaller receptacle is generally the rule, for all the old compost and dead roots must be removed.

A good potting mixture is made up of *Osmunda* or *Polypodium* fibre, the best quality peat, partly

the house at intervals with one of the reliable remedies advertised in THE GARDEN. SENTINEL.

ROCK AND WATER GARDEN.

A DRY RETAINING WALL AT GODSTONE.

THE **T**HE low, dry retaining wall, with rough stone steps, shown in the accompanying illustration, is in the Italian garden at Garston Park, Godstone, the residence of Mr. E. W. Blessig. As will be seen, the wall is planted with various kinds of trailing plants, while the Roses on the wall at the back form a suitable setting to the more lowly vegetation. The clock-tower was removed from St. Mary le Poer Church, Old Broad Street, London, E.C., when the church was demolished in 1907, and was erected in its present position by a former owner of Garston Park. It bears the inscription "John Thwaites 1797."

A TULIP FOR THE ROCK GARDEN.

(*TULIPA PRIMULINA*.)

Now that the autumn is here, we must decide what bulbs we shall buy to extend the beauty of our alpine garden. While Narcissi, Galanthus and the many species of Crocus are frequently seen, the various species of Tulipa are not so often noticed; and while to a certain extent formal in their shape, they make a delightful patch of colour amid the cushions of the alpine plants. Among the few species which I have grown, some stand out more forcibly than others, possibly because of the contrast they happened to make with other plants at the moment of flowering, rather than that they were really more praiseworthy than many of their kindred.

Certainly the brilliant yellow cups of Tulipa persica clusiana, with their rich golden bronze reverse, make a charming picture, and are

eye than in the case of *T. persica*, and if planted among some dwarf Sedum, such as *S. album*, or one of the looser-growing Mossy Saxifrages, the foliage as well as the flowers will be kept clean from splashing soil. I find they take very kindly to a compost of loam, leaf-mould and sand, worked into the already gritty soil of the rock garden, while they are very accommodating as to aspect, provided they are somewhat sheltered from driving winds, which are liable to bruise the flowers. REGINALD A. MALBY.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

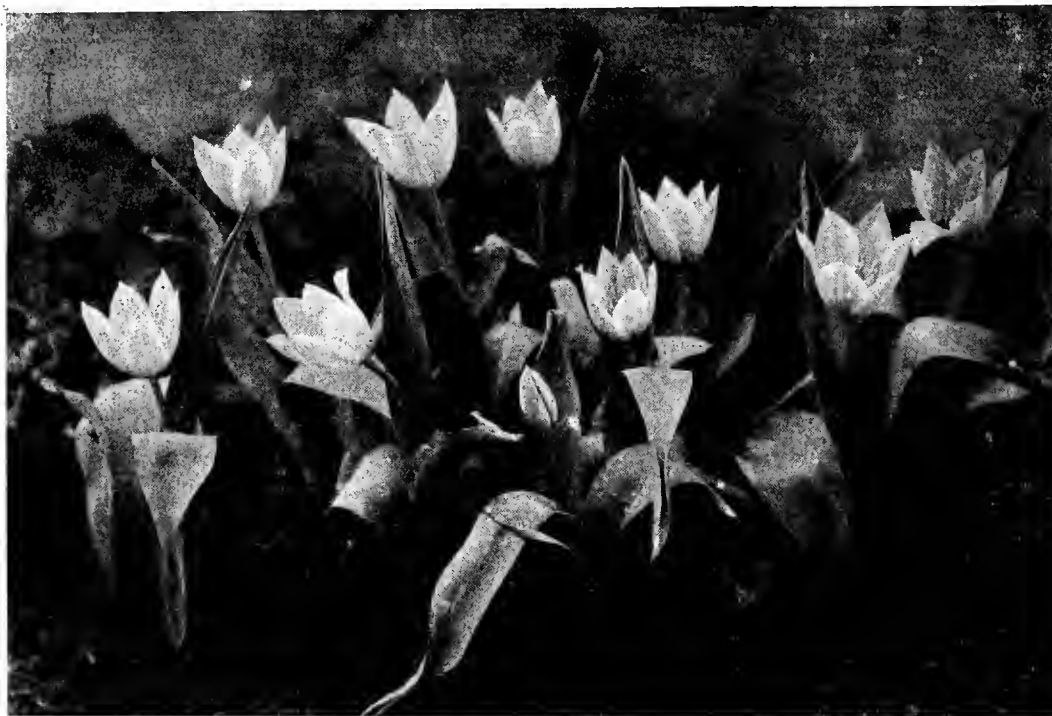
Harvesting Carrots.—There can be no doubt as to the importance of these roots during the

of quality and flavour, and those who want Parsnips in perfection must store in the beds where they have grown and draw for use as wanted. This involves covering the bed so effectually that it is impossible for frost to enter sufficiently to entirely stop digging. Spread on hay, straw, Bracken Fern—in fact, anything that may be at command, and see that the covering is equal to any demands that may be made upon it. It is wise to secure enough roots for one week each time that lifting is in hand. There will not be much loss in that time.

Winter Greens.—There can scarcely be any doubt that in some soils and situations the several kinds of green vegetables, which are of such inestimable value during the winter months, have grown more freely than is altogether desirable, for it has brought them into that condition of luxuriance which gardeners are heard to designate as "proud"—too proud, in fact, to withstand the vagaries of our peculiar weather. We cannot afford to lose them, so we must endeavour to check their progress, and it will commonly be found that treading hard round the stems when the soil is on the dry side will do all that is necessary in that direction. Alike to favour tidiness and good health, all yellowing leaves should be removed from Brussels Sprouts.

Dandelion Salad.—The day is rapidly approaching when we shall all want Dandelion salad in the winter months, and no one need find it difficult to provide. Seeds sown in thoroughly-prepared ground in April, the seedlings thinned as required to leave the plants ample space, and all weeds suppressed will ensure strong roots, which can be lifted at the same time as Carrots and Beetroots in the autumn. These are packed closely together in deep boxes with a little soil between them, and placed in a dark, warm, moist place. In a short time yellowish green leaves will push up, and it is certain that those who consume them will add a dainty salad to their dietary, and one that will render excellent aid in keeping them in good health.

Late Potatoes.—The lifting of Potatoes still in the ground must be pushed forward with all possible speed. It is much to be feared that every variety will be seriously diseased, and no efforts must be spared to store the tubers quite dry and with every suspected specimen removed. Where spraying was adopted during the growing season the tubers are much sounder, though the almost continuous rains of that period prevented the mixtures doing as much good as they would have done in a drier season. In any case do not store in larger heaps than is absolutely imperative, and spare no efforts to examine the whole of the stock at frequent intervals. Violent heating in big heaps helps the disease to spread, and if no inspection is made it is quite conceivable that the whole of the crop will become a mass of diseased tubers. Admit plenty of fresh air to the storehouse, but strenuously guard against frosts, as they will instantly spell ruin. H. J.



A COLONY OF *TULIPA PRIMULINA* IN A SMALL ROCK GARDEN. BULBS MAY BE PLANTED NOW.

sufficiently dwarf—about 4 inches or 5 inches—to place close to the eye. Tulipa Greigii, too, hailing from Turkestan, makes a splendid splash of colour, as its goblets of brilliant orange scarlet, spotted on the inside, rise from their handsome leaves. With me, however, this has not proved too robust, flowering less freely than others. Perhaps I have been unfortunate, or did not give it the best position.

One of the most effective and daintily-coloured of this lovely family, and one which flowered remarkably well with me last spring, was Tulipa primulina, or, to be more exact, *T. stragulata primulina*. The flowers are of a soft primrose yellow and very beautiful in form, while the foliage is of a delicate glaucous green. A group of these suitably placed in the alpine garden is most attractive.

As their height is 12 inches or thereabouts, they can be employed somewhat further from the

winter months, when the change of vegetable food is none too abundant even in the best gardens, and the grower must spare no efforts, beyond the production of the crop, so to preserve it that the utmost value is secured. This spells care in storage, and no untidy heaps will satisfy. No root must be broken or bruised in lifting, and nothing beyond the roughest of the soil ought to be removed. Then in a suitable outhouse, cellar, or other place build up neat, square heaps of alternate layers of Carrots and sand or fine, dry soil. Here the roots will keep quite plump, retain the whole of their flavour, and are easily procurable whenever a supply may be required.

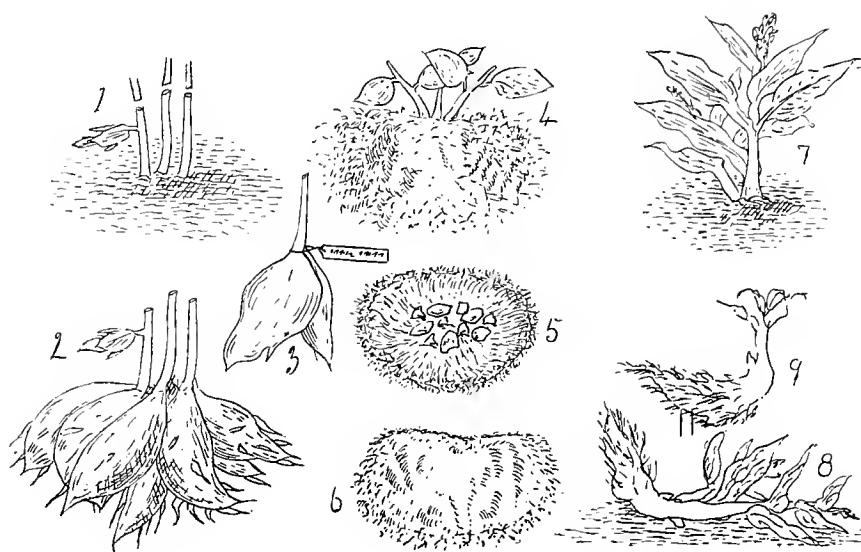
Parsnips for Winter.—It is regretted that Parsnips cannot be satisfactorily wintered in a manner identical or similar to that adopted with Beetroots and Carrots. The fact, however, remains that no matter what material is utilised for storage or where the heap is located, there is marked loss

GARDENING FOR BEGINNERS.

HOW TO STORE DAHLIAS, BEGONIAS AND CANNAS.

ALL these can be safely stored through the winter months by amateur cultivators who only possess primitive means for the keeping of such plants. A high temperature is neither necessary nor desirable, and some, owing to inexperience, spoil good produce through subjecting it to an unsuitable temperature. A very moderate temperature—with, of course, safety from frosts—dryness and freedom from cold draughts are essential points to observe. The Dahlia and Begonia are both very soon damaged by frosts, and the last-named may be lost through placing the tubers too close to hot-water pipes and under a drip from a plant stage.

The early frosts, which blacken the leaves of Dahlias, do not, as a rule, injure the tubers, but it is always better to take up the latter before any frosts affect the tops. The first thing to do is to make the name labels secure to the stem just above the ground, then cut off the tops about one foot from the soil-level, as shown at No. 1. The soil must be removed far enough away, so that the tubers will not be damaged by the spade and fork used. No. 2 shows a cluster of tubers properly lifted; and No. 3 a younger tuber with the label properly attached to it. No. 4 denotes a Begonia tuber as lifted from the soil; No. 5 shows the crown of the tuber with the leaf-stalks removed when well ripened; and No. 6 shows the same tuber cleared of surplus soil, and ready for storing in dry fibre, sand or soil in shallow boxes. No. 7 shows a Canna plant ready for lifting; No. 8 the same plant laid on a dry base to dry—the plants should be laid in rows on the floor of a shed and the root portion covered with mats until the leaves have shrivelled a little; and No. 9 shows the same root ready for storing in sand, soil or fibre in sheds. No. 10 shows a cluster of Dahlia tubers simply covered with straw. This is the wrong way to store them, as frost may penetrate the straw. Another wrong way to store is shown at No. 11. Begonia tubers in boxes placed so close to the hot-water pipes are sure to be lost through decay.



HOW TO LIFT DAHLIAS, BEGONIAS AND CANNAS FOR STORING.

How to Store.—Dahlia tubers are safe if stored in sand, as shown at No. 12, in a dry shed. Frost is excluded, and fungus will not grow round the crowns of the tubers. No. 13 shows how to arrange Begonia tubers in shallow boxes filled with sand or fibre. These boxes may be placed on shelves in a fruit-room or any frost-proof shed, as shown at No. 14. It is best to store Cannas underneath, also Dahlias, as shown at Nos. 15 and 16 respectively. Where walls face the north it is a good plan to put some straw against the wall to protect the roots, as shown at No. 17. The straw (No. 18) must be well padded against the wall.

The wrong way to trim Cannas and Dahlias is denoted by the sketches Nos. 19 and 20 respectively. If the stems be cut off while rather green close to the tubers, there will be a considerable weakening of the latter at once, and, later on,

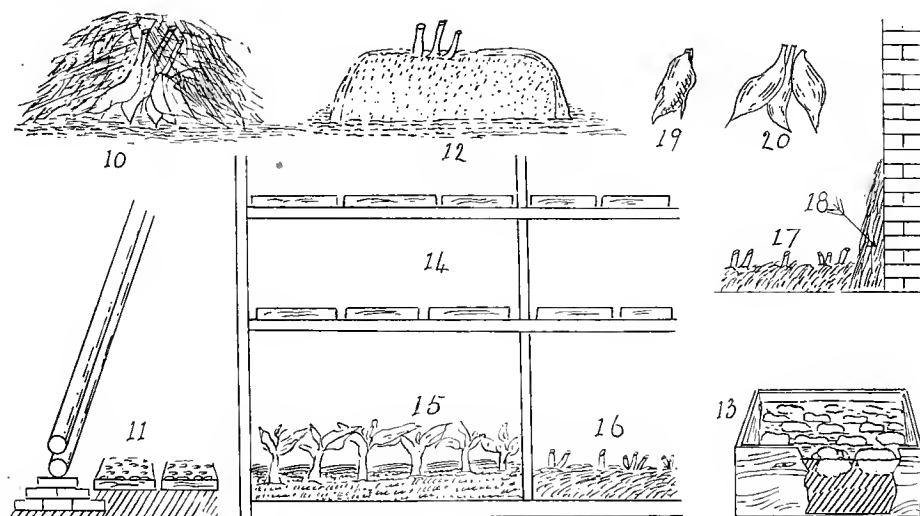
possible decay of the tuber. In some cases it may be found desirable to divide some of the roots, and where this is done the wounds made must be allowed to dry up nicely before the parts are covered over with soil, sand or fibre. A close-fitting covering is better than a loose one, such as is formed by straw or Fern, but dry straw or Fern may be put on in addition to the sand or fibre with advantage in cases where sudden severe frosts occur.

G. G.

HOW TO POT SPIRÆAS, DEUTZIAS AND DIELYTRAS FOR FORCING.

It is because every plant has to be so carefully handled and treated right from the time of potting to the flowering stage that we value them so highly. There is another reason, a not unimportant one either, namely, the general scarcity of flowers at the time the forced ones are in bloom. The work of potting, watering and forcing of these plants is a very interesting one also. The clumps of Spiræas, both those lifted from our own borders and purchased, should possess prominent crowns, and the same remark applies to the clumps of Dielytras. It is not necessary to use very large pots; if the latter are big enough to contain the root and a small quantity of soil they will do nicely. Loam and leaf-soil in equal proportions, with plenty of sand added, will make a suitable compost. As great quantities of water will be necessary later on, it is an important matter that plenty of drainage material be put in and well placed. Until required for forcing gently, keep the newly-potted roots in a cold frame, or plunged in a bed of ashes outside. Deutzia plants have fibrous roots, and if some soil adheres to them so much the better. Rather more loam must be used in the compost for Deutzias, and firm potting should be the rule. After giving one watering to settle the soil, it will not be necessary to give more than is sufficient to maintain the soil in a medium state of moisture. Deutzias should not be forced too early in the season, especially those plants that have been lifted from the open border.

SHAMROCK.



RIGHT AND WRONG METHODS OF STORING THE ROOTS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Dahlias.—In all probability before these lines appear in print frost will have put an end to the season of flowering of these popular and invaluable autumn-flowering subjects, and those varieties that are required for next season must be lifted and the tubers preserved during the winter months. The growth should be cut down to within 5 inches of the base, and the roots carefully lifted and placed in a cool but frost-proof shed, where they may be kept dry and be examined occasionally. A little dry soil may be worked in among them; but this does not really matter. Tie the label of each variety securely to the remaining growth. This will prevent much confusion.

Spring Bedding Plants.—As soon as the summer occupants become frosted or fail to be attractive, have the plants cleared and the beds well dug and prepared for such subjects as Wallflowers, double Arabis, Alyssum and Myosotis for the spring display, so that these may become firmly established before winter sets in. Avoid planting too thickly, as if all goes well they will grow before flowering in the spring, and splendid effects may be obtained by planting suitably-coloured Tulips and Hyacinths between the plants.

The Rock Garden.

Aubrietias.—The cuttings of the numerous and beautiful varieties will now be found to strike readily if inserted in pots of sandy soil. Their freedom of flowering commends them to all lovers of alpine flowers, and included among their colourings may be found a shade to meet almost every taste. A few of the best are Lavender (a beautiful shade, as the name implies), Moerheimi (a lovely pink), Dr. Mules (a most profuse and persistent flowerer), Pritchard's Ar and Fire King.

Iberis gibraltarica.—For spring flowering on the rockery or edging to the borders this is an excellent and beautiful plant, and the stock may be easily increased at this season by cuttings, which will root readily, as will also *I. corææfolia*, with its masses of pure white flowers.

Sedum spurium splendens.—This is a charming late-flowering Sedum that is making a brilliant display, and well worthy of inclusion at this season.

Plants Under Glass.

Browallia speciosa major.—This is an exceptionally useful plant for the greenhouse at this season of the year, and for those who admire blue and its shades is indispensable. During the plant's season of growth it likes a slightly warmer temperature, but, like many others, when flowering these last much longer when allowed to expand under cooler conditions. Plants are easily raised from seeds, or may be perpetuated by cuttings taken after flowering.

Lily of the Valley.—The forcing of retarded crowns is quite an easy matter where one has the command of fire-heat, and they may be brought along in very quick time. These, after potting or boxing, are best covered over with a little moss and kept in a subdued light for a few days, keeping them well supplied with moisture.

Fruits Under Glass.

Strawberries.—The plants for forcing must be wintered in a convenient place where they are easily got at for forcing in batches later on. Much will depend on the weather experienced, and no hard-and-fast rule can be laid down as to when these should be packed away. The pots should be well packed in leaves or ashes to protect them from frosts, and, if possible, a cold frame given up to them where they can have protection from heavy rains. The plants should, of course, be placed on a firm basis, preferably cinder ashes, to prevent worms entering the pots.

Late Melons.—To finish these well requires a considerable amount of judicious care and attention as regards airing and watering. The use of manures should be very cautious, it being far better to finish smaller fruits than those larger and less flavoured. Give air at all favourable opportunities and in plenty, with a circulation of heat when the fruits are ripening and less moisture in the house, withholding water at the roots.

The Hardy Fruit Garden.

Peaches and Nectarines.—These are fruits that a great many owners of small gardens would

like to possess, and where a suitable position can be afforded them, and also protection given when in flower, with periodical attention to the trees' requirements, such as disbudding the foliage, thinning of the fruits and feeding, excellent fruits may be obtained, especially in a season such as the last. But unless the trees can be given this attention, I would urge amateurs to leave their culture alone. As soon as the leaves are off, or even before, any transplanting, lifting or root-pruning that is necessary may be carried out. Young trees that have carried no fruits are apt to make much too gross a growth, and the latter treatment will do much to improve them.

The Shrubbery.

Transplanting.—Though it seems somewhat early, the work of transplanting, especially of many of the evergreens, may be proceeded with at once, and with the continuous rains experienced this season the shrubs should move well. A rule which applies to all planting, whether fruit trees or anything else, is to have the hole sufficiently large, as nothing will check growth more than cramping the roots. Where planting of large subjects has to be done, the holes may be prepared at any time, and these form excellent places to bury leaves and other rubbish.

The Kitchen Garden.

Endive.—Continue to prick out into cold frames the seedlings that were sown last month. Lift the plants growing out of doors, and plant closely together in cold frames to blanch.

Lettuce.—This requires similar treatment, with the exception of the blanching. Ventilate the frames freely, so that the plants do not damp off.

Salsify and Scorzoner.—Where these vegetables are grown, the crop will by now have completed growth, and if the space is wanted, lift and store in sand or ashes.

Onions.—One of the best methods of storing Onions where space is limited is that known as roping, as the bulbs are easily got at when required, are exposed to the air, and are portable. Some local shows provide a class for the best rope of Onions, and it is an interesting feature. Whether intended for exhibition or no, the bulbs should be graded and placed in their sizes accordingly.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Montbretias.—As a rule it is best to lift these. They may be safely preserved if buried deeply by the side of the wall of a building—so deep that frost cannot reach them—especially if straw is heaped over them when hard frosts supervene. If any are planted at this time, see that the corms are 6 inches below the surface, and add some protecting material over all.

Herbaceous Borders.—As soon as the bulk of the flowers are over, these should be rearranged, either in whole or in part. Quite a number of plants succeed best when treated as annuals—that is, broken up and replanted every autumn or spring. The labour and rearranging are much lessened and simplified if the planting follows closely on the cultivating of the ground, and this method has the added advantage that wet, should rain fall, does not stop planting, as is the case when the freshly-worked soil gets saturated previous to replanting.

How to Plant.—Everyone has his or her own method of arranging, but the great majority of plants produce a superior effect when planted in small pieces and set close together, rather than large sets and wide apart. It is not easy for the inexperienced to credit and work upon this, but there is nothing more certain. Some plants, e.g., *Kniphofias*, if lifted do better not divided, unless very large, and others, e.g., *Statice*, *Helleborus niger*, the *suffruticose Candytufts*, *Japanese Anemones*, *Irises* generally, *Trollius* and *Astilbes*, are better if left undisturbed for a long series of years.

Weedy Perennials.—There are some, on the other hand, which extend so rapidly and persistently as to become weeds. *Senecio tangenticus*, some of the *Asters*, *Bocconias*, *Solidagos* and *Helianthus* are examples. They can hardly be dispensed with,

and the only way of keeping them within due bounds is to dig up the plants carefully before cutting over the stems and replanting with care, in early summer rooting out any pieces that have been overlooked just now.

Planting Bulbs.—If the ground is in good condition, much labour, in at least some kinds of soil, is saved if the ground is merely eased up with a fork, some rotten manure having previously been spread over the whole surface, and the ground, if dry enough, lightly pressed with the foot. The manure gets well mixed with the soil in planting either bulbs or plants. Plant rather close so as to have an even bloom. A thick dressing of soot when the planting is finished will be serviceable in hindering blackbirds from working among the soil. It also forms a very effective manure.

The Vegetable Garden.

Seakale.—Some Seakale crowns may be lifted, rested by lying for ten days or so exposed, then trimmed of roots and placed among damp leaf-soil in a box, to be covered and placed in a hothouse. The crowns are sometimes difficult to start at this season, but the drying and, subsequently, a high temperature induce growth.

Rhubarb.—A number of roots may be placed in the Mushroom-house, where they will continue throwing up stems for many weeks. I merely keep the roots moist, and place no soil or other material about them. A fresh plantation may be made now by division of the old roots, or from seedlings. Dig the ground—or trench it is better—giving about three-quarters of a ton of cow-manure to each square rod. Plant 4 feet to 6 feet apart.

Horse-radish.—Roots to last the winter may be lifted at any time, and preserved for use in a shed and covered with sand. Either now or later a fresh plantation may be made, trenching the ground 2 feet deep and inserting short pieces of the roots 10 inches below the surface. This can be done as the work proceeds. The growths come up as straight as an arrow, which material planted near the surface cannot be depended on making. Manure is not of importance for this crop, and if difficult to obtain, none need be added to the soil.

The Plant-Houses.

Cinerarias.—If frames are in a position where frost strikes them, it would be as well to transfer the plants to a pit or other suitable structure, but they succeed so much better in cold frames that they should not be removed thence until it is unsafe to leave them longer. A cool bottom should be given them in the pit, such as stone or gravel, in preference to standing them on a wooden trellis. Manure-water at regular intervals will be appreciated.

Roses.—Young plants of Dorothy Perkins, *Hiawatha*, &c., growing in borders may now be lifted and transferred to pots for spring flowering. If placed in a glass structure at once, let it be a perfectly cool one, when roots will be produced without the buds being excited, but the plants will do perfectly well in the open, the pots meanwhile being plunged in some moist material. Roses trained in houses may be pruned now, thinning out all weakly material incapable of bearing blooms, and shortening the others as little as possible so long as no immature points are left.

The Fruit Garden.

Currants.—Both Red and Black, may now be pruned, and the ground dressed for the winter. A large amount of young wood should be left on Black Currants, as it is mainly on this that the fruit appears. Some growers top the shoots, but, provided a supply of young ones are being thrown up from the base of the bushes, that need not be done. Anyhow, it has a tendency to thicken the shoots unduly and diminish the size of the berries.

Apples.—The root-pruning of trees that have yielded their crop may now be proceeded with. If young trees are properly managed, it seldom happens that when old they need their roots cut. Old trees should have only a portion shortened at one time, and if very old and the roots very thick, only the smaller of these should be cut.

Pears not too old are very susceptible to the influence of root-pruning. The effect on seemingly hopelessly barren trees is extraordinary, the crops in the course of two or three years being very large. Yet the utmost caution must be exercised in the case of old neglected trees, which may be killed outright if severely handled.

R. P. BROOKERSON,

Tynningham, Prestonkirk, —N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Pyrus veitchiana.—A new species from China and exhibited for the first time. The plants were of rather tall, spreading, diffuse habit, with Nut-like leafage and dark woody stems bearing axillary clusters of roundish crimson fruits. Judged by these examples, the plant should prove highly ornamental.

Cotoneaster bullata.—A diffuse-habited plant of rather tall growth, bearing crimson berries in bunches from the nearly horizontal or slightly drooping branches.

Berberis stapfiana.—This new species is of erect, bush-like habit and, as shown, about three feet high and through, the branches being freely furnished with spines and rather thickly set with light coral red fruits. These three novelties were exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Aster Nancy Ballard.—This is one of the semi-double-flowered Michaelmas Daisies, and is calculated to become one of the most popular by reason of its neatness and the warmth of its rosy mauve flowers. It is of medium height and produces handsome panicles of flowers. Exhibited by Mr. Ernest Ballard, Colwall, Herefordshire.

Chrysanthemum Mrs. Lloyd Wigg.—A large and handsome variety of the drooping-petalled Japanese type, and clear canary yellow in colour. From Messrs. William Wells and Co., Limited, Merstham.

Chrysanthemum ...—A so-called single that is bound to be in demand because of its colour—a rich gold and yellow. The variety, too, is possessed of a sturdy habit of growth, a short peduncle, and is generally well set up. Exhibited by Messrs. Cragg, Harrison and Cragg, Heston, and by Messrs. Wells, Limited, Merstham.

Cotoneaster Zabelii.—A tall and rather thin-habited species whose branches are furnished with berries of a dull red or deep crimson shade.

Cotoneaster salicifolia rugosa.—A brilliant and striking plant of considerable worth and ornament. Tall and spare of habit as exhibited, it is still freely furnished from the main stem with yard-long, slightly drooping and slender branches, which are freely endowed with clusters of scarlet fruits throughout the greater part of its length; hence it is as distinct as it is beautiful and ornamental. These two novelties were from the gardens of the Hon. Vicary Gibbs, Elstree.

Adiantum cuneatum micropinnulum.—The varietal name here is somewhat descriptive of one of the most elegant and beautiful Ferns we have seen. In effect it is an *Adiantum cuneatum gracillimum* whose pinnules have been reduced to the last degree of fineness. The red-tinted fronds of youth add to the many charms of an exceedingly graceful variety. From Messrs. H. B. May and Sons, Edmonton.

NEW ORCHIDS.

A first-class certificate was awarded to *Cattleya harrisiana*, shown by C. J. Phillips, Esq., The Glebe, Sevenoaks. It is a handsome hybrid, with white sepals and petals and a brilliant ruby purple lip. Parentage: *C. Fabia alba* × *C. Warszewiczii* Frau Melanie Beyrodt.

Awards of merit were granted to the following: *Cattleya hardyana* Herbert Goodson, from H. S. Goodson, Esq., Fairlawn, Putney; *Miltonia*

Harwoodii, from Sir Trevor Lawrence, Bart., K.C.V.O.; *Cattleya Mrs. Pitt* Charlesworth's variety, shown by R. C. Doux, Esq., Marfield, Liverpool; and *Odontioda Charlesworthii* Orchid Dene variety, from Messrs. J. and A. McBean, Cooksbridge.

All the foregoing were shown before the Royal Horticultural Society on the 8th inst., when the awards were made.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 29, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PHLOXES (Miss E. A. H.).—Without seeing specimens of the disease we could not say what is amiss, though from the suddenness of the failure it might be due to stem-eelworm, and if so, your only remedy is to cut down and burn all affected parts. Wireworm, if present in the soil, might also be responsible for the mischief, and if so, the bored stems should afford the proof.

MIGNONETTE (M. D.).—Your Mignonette is attacked by a fungus at the root. Fungi are, as a rule, greatly encouraged by the presence of an acid soil, and Mignonette, on the contrary, delights in lime-rubble. We have, just where we are writing, one of the finest beds of Mignonette we have ever seen, growing in mortar rubbish and a little sandy soil. You would probably have better success if you had some lime-rubble mixed with the soil in which you are going to sow your Mignonette another season.

PHLOXES FAILING (M. C. L.).—The failure has been brought about by stem-eelworms, and the only thing to be done in the circumstances is to collect all the affected parts and burn them. This is the more necessary, since the pest is likely to be perpetuated from year to year through the medium of its eggs, as these continue in the soil and in due course gain entrance to the stems of the plants. The soil should be treated with sulphate of potash at the rate of 1 lb. to 12 square yards or 15 square yards. A few months later a further application might be given, first stirring the soil well.

TREES AND SHRUBS.

POTTING VALLOTA LILIES (F. G. W.).—The best time to repot *Valloa* Lilies is immediately the flowers are past. Annual repotting is, however, by no means necessary, providing the roots are in good condition; indeed, when in that state they will stand for two or three years without being potted. *Valloas*, in common with other bulbous plants, will flower freely when the bulbs are tightly packed together in the pot. At the least sign of decay about the roots they should, however, be repotted.

BLUE HYDRANGEAS (T. S. and N. L.).—In some soils *Hydrangeas* turn blue, while this tint is often produced artificially. It is generally assumed that the presence of iron in the soil is the cause of the change, and this has been borne out by numerous experiments. When grown in pots, one of the most successful methods of treatment is to thoroughly mix about a tablespoonful of sulphate of iron with each peck of soil. Then, in addition, as the pots get full of roots, put a pinch of it in the water about twice a week. Refuse from the blacksmith's shop is sometimes mixed with the soil, but it is less satisfactory than using the sulphate. Alum-water has also been used to induce the required blue colour. The alum should be given at the strength of 1 oz. to each gallon of water. To prepare the alum, it must first be crushed and dissolved in a little hot water. This should be given directly the flower-buds are visible, watering the plants with it at intervals of eight or ten days, and discontinuing it when the flowers open. It must never be given when the roots are very dry. A liberal quantity of lime in the soil is against obtaining the required blue colour. We have just heard of a Continental preparation for making *Hydrangeas* blue. It is called Cyanol, and can be obtained from horticultural sundriesmen. We have not tried it ourselves, but know where it has given satisfaction.

ROSE GARDEN.

BORDER AND ROSE-BED (Enquirer).—With regard to the portion intended to be devoted to Roses, the idea of an addition of clay soil is good, provided that you intend to incorporate this with the staple soil. Our advice for the entire border would be to give a 9 inch dressing of the clay throughout, allow it to lie exposed to the action of air and frost for some weeks, then deeply trench the whole, and break down and incorporate the clay as the work proceeds. After trenching add burnt refuse from the garden rubbish fires, and after the lapse of a month retrench the whole and add well-decayed manure freely. In this way you would secure a permanently useful soil, together with a liberal addition of lime present in the clay, and of which your present soil stands much in need. With the second trenching completed, you might plant the Roses at once, or you might leave the planting of the whole border till the turn of the year.

REMEDY FOR BLACK SPOT (S. M. B.).—We wish we could help you; but, unfortunately, there seems to be no remedy for this disease. We really believe it is largely imported from the Continent, for we know whole fields are defoliated by the pest in some seasons. If you could transplant your Roses to a new site, or have the bed-overhauled this autumn, you might get rid of the pest, and unless the plants are old we should strongly advise this plan. By trenching deeply and burying the surface soil you would largely destroy the fungus; then in spring commence early and continue to spray throughout the summer with Cupram, which is a preparation of carbonate of copper dissolved in ammonia; or, if you cannot obtain this, spray with Bordeaux mixture.

ROSE FOLIAGE BLIGHTED (I. C. E.).—The foliage you send is badly attacked with mildew, a disease or fungus very much in evidence among Roses at this season of the year. It can be kept in check, if not entirely subdued, by timely spraying with V2 K Fluid or Jeyes' Horticultural Wash, and for both we would refer you to our advertisement columns. Often these rambles suffer from drought. We look after other Roses, but too frequently these are neglected. We should advise you to cut off the badly-diseased shoots and burn them, then give a good spraying with the wash. Also fork around the plants and give each of them four or five gallons of water, repeating this once a week if the weather continues dry. Some liquid manure would also be helpful, but it is best to apply the plain water first.

ROSE FOLIAGE DAMAGED (P. H.).—As you have not sprayed the Roses, we cannot attribute the damage to the insecticide, although at first sight we were disposed to do so. There must be something in the soil or air to cause such damage. Have you any chemical works near you? Or have the plants had too strong a dose of some chemical? We should advise you to dig a plant up and examine its roots. If the fine roots are quite white they are all right. There is, unfortunately, such a tendency to make up Rose-beds containing all sorts of chemicals that the wonder is so few of the plants fail. Perhaps you can furnish us with some particulars as to the making of the beds. In the meantime cut off this scorched foliage and cut back the growths to good strong eyes. Keep the soil well stirred and refrain from artificial watering for a time.

ROSES FAILING (P. H.).—There was very careless preparation adopted as regards the plants, for they had been planted without pruning their roots. It is always advisable to trim these back rather considerably before planting. Evidently the soil is not at fault, for you say some of the plants are sending up nice shoots now. We fear there is great carelessness adopted by some growers when they despatch the plants in not taking sufficient care of the roots. These should always arrive in a moist condition, and most up-to-date Rose-growers see that this detail is attended to. We advise you to look carefully into this matter when planting again. On trimming the roots they should be quite white when cut, and should have a sort of fleshy appearance. You can soon detect by this if the plants are healthy. If they are dry and shrivelled, we should refuse such plants.

MISCELLANEOUS.

NAMES OF PLANTS.—*F. M., Workshop.*—1, *Quercus nigra* (Water Oak); 2, *Q. Phellos* (Willow Oak); 3, *Pyrus torminalis* (Wild Service);—*Hamish.*—1, *Asplenium Filix-foemina cristatum*; 2, *A. F.-f. cruciatum cristatum*; 3, 4 and 5, forms of *A. F.-f. Friselle capitatum*; 6, *A. F.-f. cruciatum cristatum*; 7, *Scelopendrium vulgare* variety: 8, *Aspidium aculeatum*.—*W. E. P.*—1, *Cryptomeria elegans* (Japan Cedar); 2, *Muehlenbergia varians*; 3, *Helixine Solierifolii*.—*A. W., Somerset.*—1, *Cotoneaster frigida*; 2, *Chrysanthemum uliginosum*; 3, *Solidago canadensis* (Canadian Golden Rod);—*T. R., Hillington Heath.*—Spindle Tree (*Euonymus europaeus*).—*Mrs. G.*—*Polygonum orientale*.—*E. F. C., Hants.*—*Chironia ixifera* ssn. *C. linoides*.—*D. M. M.*—1, *Cotoneaster Simonsii*; 2, *Escallonia macrantha*.

NAMES OF FRUIT.—*W. H., Surrey.*—Dutch Codlin. —*B. Marshall, Herts.*—Rosemary Russet.—*Stockwith.*—*F. Bramley's* Seedling; *G. Jolly Beggar*; *H. Lane's* Prince Albert; *M. Nelson's* Codlin. —*Mercury.*—1, Wellington; 2, Cat's-head; 3, Fearn's Pippin; 4, too poor to name; 5, Bowhill Pippin; 6, Pearson's Plate; 7, Dutch Mignonette; 9, Withington Filbasket; 10, Peasgood's Nonsuch; 11, Sugar-loaf; 12, Alfriston; 20, Beauty of Hants; 30, Swan's Egg; 31, Bishop's Thumb; 32, Josephine de Malines. —*Captain M. B., Northumberland.*—1, Maltster; 2, Dutch Codlin; 3, Flanders Pippin; 4, Cox's Pomona; 5, Lemon Pippin. —*G. J. B.*—1 and 2, Bismarck; 3, King of the Pippins; 4, Ross Nonpareil; 5, Hawthornden; 6, Cobham; 7, Flanders Pippin; 8, Vicar of Winkfield.

SOCIETIES.

EXHIBITION OF BRITISH-GROWN FRUIT.

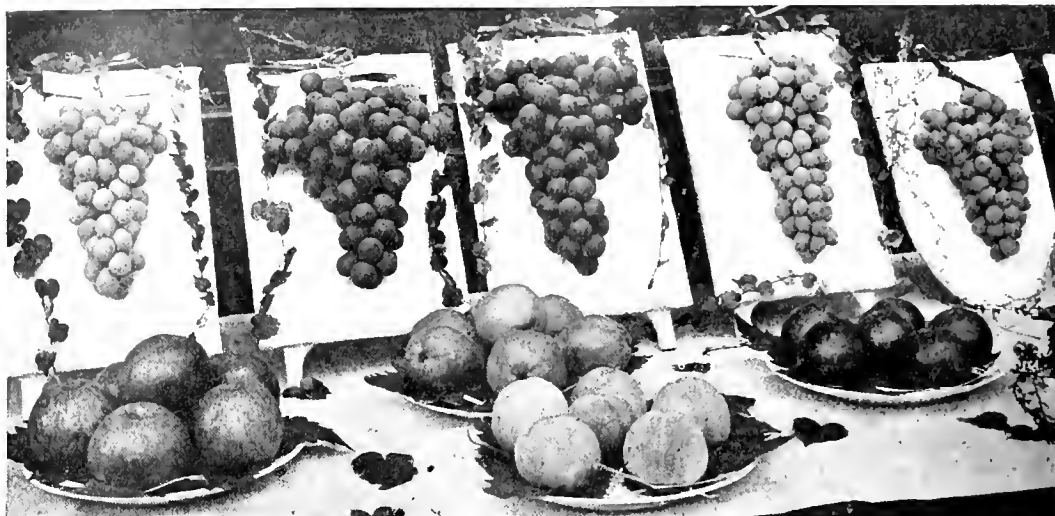
From the standpoint of popularity among professional gardeners and market-growers, the annual exhibition of British-grown fruit is the best the Royal Horticultural Society holds at Vincent Square. The display on Thursday and Friday of last week, though not quite so extensive as usual, was of exceptionally good quality throughout, and proved that first-class fruit can be grown in seasons as unfavourable as the past has undoubtedly been.

In the class for the Affiliated Societies' Challenge Cup, for six dishes each of cooking Apples, dessert Apples, and dessert Pears, distinct, six fruits to each dish, there were four entries, the first position being won by the Ipswich Gardeners' and Amateurs' Association. The Pears here were exceptionally good, and the dishes of Apples Ribston Pippin, King of the Pippins, Cox's Orange Pippin, Peasgood's Nonsuch, Charles Ross and Bramley's Seedling called for special mention. Second prize went to the East Anglian Horticultural Club, which won the challenge cup last year. The Pears here were even better than those in the first-prize collection, but the Apples were not quite so well coloured. Annie Elizabeth was, however, a superb dish. Third honours went to the Colchester and District Gardeners' Association, Pitmaston Duchess Pear and Cox's Orange Pippin and Newton Wonder Apples calling for special mention. The challenge cup was awarded to the Colchester Association as Ipswich and East Anglian have won it during the last three years.

DIVISION I.

Open to Gardeners and Amateurs Only.

For a collection of nine dishes of ripe dessert fruit there were four superb collections, Lady Henry Somerset, Eastnor Castle, Ledbury (gardener, Mr. G. Mullins), being placed in the coveted first position with an almost perfect collection. Grapes Muscat of Alexandria and Gros Maroc, Countess Melon, Charles Ross Apple, Pineapple Nectarine, Peaches Late Devonian and Barrington, and Doyenné du Comice and Pitmaston Duchess Pears were other items shown. These were in every way admirable. Second, the Duke of Newcastle, Clumber, Worksop (gardener, Mr. S. Barker), whose weaker bunches of Grapes told against him for the first place. The finer dishes were Appley Towers Grapes,



THE FIRST-PRIZE COLLECTION OF DESSERT FRUIT IN CLASS 2 AT THE BRITISH FRUIT SHOW.

Peaches Golden Eagle and Solway, Apple Washington, and Pitmaston Duchess Pears, which were very fine. The Peaches and Pears were particularly good and strong in this lot. Third, the Earl of Harrington, Elvaston Castle, Derby (gardener, Mr. J. H. Goodacre), whose Golden Eagle Peaches and Washington Apples were very fine.

For a collection of six dishes of ripe dessert fruit there were six entries, the leading place being occupied by Lord Belper, Kinaston Hall, Derby (gardener, Mr. W. H. Cooke), whose best dishes were bunches of Gros Colmar Grapes, fine in berry and well finished; splendid Gladstone Peaches, and Charles Ross Apples of magnificent quality (see illustration above). Second, Lord Hillingdon, Wildernesse, Sevenoaks (gardener, Mr. Shelton), whose Doyenné du Comice and Pitmaston Duchess Pears were very good. Muscat of Alexandria Grapes were also good in this collection. Third, Lord Howard de Walden, Audley End, Saffron Walden (gardener, Mr. J. Vert), who showed some capital dishes of fruits.

For five distinct varieties of Grapes, two bunches of each, the Duke of Newcastle, Clumber, Worksop (gardener, Mr. S. Barker), was in the place of honour, his fine examples

being Gros Maroc, Buckland Sweetwater, Madresfield Court and Muscat of Alexandria. The first-named were particularly well coloured. Second, the Earl of Harrington, Elvaston Castle, Derby (gardener, Mr. J. H. Goodacre), with good examples of Golden Queen, Gros Maroc and Muscat of Alexandria. Mr. Charles Beyer, Tewkesbury Lodge, Forest Hill, S.E. (gardener, Mr. E. C. Wickens), was recommended a third prize. There were five collections staged, all of admirable quality. Our sympathies are entirely with the judges' recommendation for a third prize, two prizes in such a class being, in our opinion, altogether inadequate.

For four varieties of Grapes, two bunches of each, Lord Hillingdon, Wildernesse, Sevenoaks (gardener, Mr. J. Shelton), was first, having in his lot two superb bunches of Muscat of Alexandria, which for colour and finish were excellent. Second, Mr. H. St. Maur, Plover Park, Newton Abbot (gardener, Mr. G. Richardson), whose Muscat of Alexandria and Mrs. Pince were of good quality.

For two bunches of Black Hamburgh Grapes, the Rev. W. Beecher, Willow Hall, Newark, was first with good bunches of well-finished berries. Second, the Duke of Newcastle, Clumber, Worksop, whose larger bunches were composed of somewhat smaller-sized fruits. There were half-a-dozen competitors in this class, though the quality shown was not so high as might have been expected.

For two bunches of Mrs. Pince Grape only three competitors came to the front, the first prize going to Mr. H. St. Maur, Plover Park, Newton Abbot (gardener, Mr. Richardson), who had good bunches of well-finished fruits. Second, Mr. G. Miller, Radlett.

For two bunches of Alicante Grapes there were eleven competitors, the place of honour being secured by Mrs. W. G. Raphael, Castle Hill, Englefield Green (gardener, Mr. H. Brown), who had superbly-finished bunches of fruits. Second, Lady Henry Somerset, Eastnor Castle, Ledbury. Third, Lady Tate, Park Hill, Streatham Common (gardener, Mr. W. Howe).

Two bunches of Madresfield Court Grapes: First, the Earl of Harrington, Elvaston Castle, Derby, who showed well-finished bunches of fruits; second, Lord Savile, K.C.V.O., Rufford Abbey, Ollerton; third, the Duke of Newcastle, Clumber, Worksop. In this class the prize-winner in the second place had much the largest bunches, but they were not so well finished as a whole. Obviously size of berry and fine finish, and not big bunches, carry the greatest weight with the judges.

For two bunches of Grapes Prince of Wales, Lord Savile, K.C.V.O., Rufford Abbey, Ollerton (gardener, Mr. J. Doe), was in the first place with superb bunches of fruits, handsome in the highest degree. Second, Mr. H. H. König, Blundley Heath.

For two bunches of any other black Grapes there were thirteen competitors, the first prize going to medium-sized, well-finished bunches of Appley Towers from Mr. J. Liddell, Sheffield Manor, Basingstoke (gardener, Mr. R. J. Leamouth). Second, Mrs. W. G. Raphael, Castle Hill, Englefield Green, who had Lady Downe's. The Duke of Newcastle had some huge bunches of Trebbiana, and Lady Henry Somerset fine examples of Gros Maroc. We think so popular a class is deserving of more than two prizes.

For two bunches of Muscat of Alexandria Grapes there were eleven entries. Mr. W. W. Mann, Ravenswood, Bexley (gardener, Mr. J. Simon), taking the leading place with finely-finished bunches of fruits. Second, the Right Hon. Lord Hillingdon, Hillingdon Court, Uxbridge (gardener, Mr. A. R. Allan), with handsome bunches. Third, Lady Henry Somerset, Eastnor Castle, Ledbury.

For two bunches of any other white Grape there were eight entrants, Mr. C. A. Cain, The Nod, Welwyn (gardener, Mr. J. Pateman) being first with fine examples of Mrs. Pearson. Second, Mr. W. B. M. Bird, Earham House, Chichester. Third, Mr. Charles Bayer, Tewkesbury Lodge, Forest Hill, S.E. The quality in this class was not of a high standard generally.



A REMARKABLE BASKET OF APPLE WARNER'S KING SHOWN BY MESSRS. GASKAIN AND WHITING AT THE BRITISH FRUIT SHOW IN THE MARKET GROWERS' CLASS. THE LARGEST FRUIT MEASURED 5½ INCHES IN DIAMETER AND WEIGHED TWO POUNDS.

THE GARDEN.

No. 2136.—VOL. LXXVI.

OCTOBER 26, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Tobacco Plants and Earwigs.—So many people, particularly amateurs, refrain from growing Dahlias owing to the association of these flowers with earwigs. We have heard lately of a novel way of keeping the dreaded pest at bay. There is something objectionable to earwigs in the Tobacco plant as grown, says a careful observer, and if these plants are interspersed among Dahlias there will be little fear of the presence of this troublesome pest. We give this suggestion for what it is worth, not having experimented in this direction.

Apple Warner's King for Marketing.—The wonderful exhibit of Apples shown in the market-growers' class by Messrs. Gaskain and Whiting of Faversham at the recent show of British-grown fruit provides ample proof, if such were needed, of the excellence of home-grown fruit. The large basket of Warner's King illustrated on page 536 of the issue October 19 was perhaps the pick of this creditable display. We learn that the fruits were gathered from trees sixteen years old, and that 100 trees have averaged 1,500 bushels in the past three years. Twenty-seven of the fruits in the illustration referred to would fill a bushel basket.

Two Useful Greenhouse Flowers.—Two very pretty Abutilons may be seen in full flower at the present time in the greenhouse at Kew, where they occupy positions on the roof. One, Golden Fleece, is a variety of garden origin which is admirable on account of its clear yellow, shapely flowers; these are borne in great profusion over a period of several months. The other, A. insigne, is a species from Colombia which was introduced many years ago, but whose cultivation has been allowed to lapse except in a few gardens. Of vigorous growth, it is admirably suited for the roof of a glass-house, for its lateral branches assume a graceful, pendent character, and the pretty reddish flowers, with their heavily-netted veins, are suspended from long, slender stalks. Both these Abutilons require to be cut back well in spring, so that a good supply of new wood is formed.

A Good Outdoor Chrysanthemum.—Among a number of early-flowering Chrysanthemums that we have grown this year, none has given us more pleasure than a single pink variety. This was sent to us two years ago as a seedling by Mr. D. B. Crane. The plants attain a height of about three feet, branch very freely, and the flowers are produced in great profusion. For cutting it is ideal, a single spray in a vase being particularly pleasing. Our plants have been in flower a month and promise to continue for another fortnight, owing to the fact that the buds do not all open at once. The prominent yellow disc in the centre of the flower is surrounded by a very narrow band of white, the rest of the petals being a pleasing shade of pink. It is

very fragrant. Mr. Crane informs us that he has named it Eric Harvey.

A Useful Rock Garden Plant.—Anthemis Trunfettii is probably the richest-coloured of its set, the golden yellow flower-heads making quite an effective display even so late as mid-September and after a naturally long season of flowering. Dwarfier and superior in every way to A. tinctoria E. C. Buxton, it is a plant to remember for the choice herbaceous border or in the more conspicuous places of the rock garden, where it will be seen to advantage.

Crocus nudiflorus.—This is one of the boldest and showiest in its day of the earlier of the autumn-flowering Crocuses, a species well worthy the attention of those who indulge in grass gardening, or who by hook or by crook could squeeze such things into the quiet, sequestered places of the rock garden. Well established, the large flowers are fully 9 inches or so high, and in reddish violet tones are rendered the more conspicuous by the rich orange stigmata characteristic of this kind. A few of its flowers in sunlight are most attractive.

Waterer's Scarlet Oak.—This Oak (Quercus coccinea variety splendens) is the best of the family for rich autumn colour. It is not only richer in colour, but while some Oaks only colour well in certain seasons, the subject of this note may be relied upon to colour well every autumn. In summer the tree does not differ materially in leaf from the North American Scarlet Oak, but in autumn there is no comparison, the large lobed leaves of Waterer's Oak being much richer and deeper red. As it is a large-growing variety, it is worth considering, as an avenue tree, single specimens in the pleasure grounds, or a group of six to ten trees for effect in the park.

The Cotton Lavender for Dry Banks.—It does not appear to be generally known that the Cotton Lavender (Santolina Chamæcyparissus) is one of the best low-growing plants for clothing dry banks. In such a position it spreads rapidly, and quickly covers a considerable area with a close mass of silvery foliage, while it has the advantage of being very little trouble. Cuttings dibbled into sandy soil in a close frame root with ease, and if planted for one year in a nursery or kitchen garden border, plants quite large enough for permanent planting may be obtained. These, if placed 18 inches apart each way, quickly cover the intervening space, and the only trouble they occasion, for many years is an annual cutting over to encourage young shoots from the base. All the preparation the ground requires for the reception of the plants is to dig it over 9 inches or 12 inches deep if the soil is fairly good, or, if poor, to add a few inches of decayed leaves or manure and then dig it over.

ROGUES IN SWEET PEAS.

SOME IMPORTANT DISCOVERIES.

EVER since the Sweet Pea Countess Spencer was put into commerce, now some ten or more years ago, the question of rogues appearing in Sweet Peas has exercised the minds of those who make it their business to supply the public with seeds, and also those of the public who grow the flowers. Stocks which seedsmen have had perfectly true in their own trial grounds have, the following year, produced a large number of rogues, a fact that could only be partly accounted for. Owing to the widespread and generally-accepted belief that a Sweet Pea flower is always self-fertilised, and that bees or other insects did not effect cross-fertilisation, this question of rogues appearing in what were regarded as true stocks was, as we have already stated, difficult to explain.

In our issue for August 24, page 423, we gave particulars of some investigations which we had made in connection with Sweet Pea seeds that had been grown in California, and stated that we had come to the conclusion, for reasons we plainly set forth, that the appearance of rogues in such well-known and, in ordinary circumstances, fixed varieties as Clara Curtis and Etta Dyke was due to cross-fertilisation.

At the conference of members of the National Sweet Pea Society, held at the Hotel Windsor after the annual meeting on Thursday of last week, this was fully borne out by Major C. C. Hurst, F.L.S., Director of the Burbage Experiment Station, Leicestershire. Major Hurst is a well-known and recognised authority on Mendelism, and has conducted numerous experiments with Sweet Peas as well as with other flowers. In his most interesting paper that he read at the conference he made it quite clear that the majority of the rogues that appear in a stock of Sweet Peas the second year, and what are known as recessive colour rogues, are to a great extent due to cross-fertilisation by some outside agency, and that this cross-fertilisation occurs in this country on a rather large scale, though not to so great an extent as it does in California. The agency most largely responsible for this cross-fertilisation in this country is considered by Major Hurst to be the leaf-cutter bee, which carves the semi-circular pieces out of the leaves of our Rose bushes, though weevils and blue tits were also considered to be possible agents.

It would seem, however, that the rogues due to various causes can be almost eliminated by breeding Sweet Peas on Mendelian lines as, when this is done, not more than five rogues per thousand are given, none of which are type rogues or recessive colour rogues, the five being all what are known as dominant colour rogues. In ordinary commercial stocks of Sweet Peas tested by Major Hurst, and which were not, of course, obtained by an application of Mendel's laws, one hundred and eight per thousand were rogues; while in the National Sweet Pea Society's trials conducted at Burbage, one hundred and fourteen per thousand rogues were found. In these instances many of the rogues were contrary to type, *i.e.*, instead of having the open keel that characterises the Spencer Sweet Peas, they had clamped or united keels. The complete removal of such type rogues would render the remaining stock perfectly true so far as type was concerned, and thus one evil would be eliminated. The dominant colour rogues, which always show the first year, could also be removed and thus got rid of; but the recessive

colour rogues, providing cross-fertilisation had been effected, would appear the following year. Constant vigilance is, therefore, necessary to reproduce any variety of Sweet Pea true year after year.

Naturally, a paper of this kind was of a highly technical character, but the importance of Major Hurst's revelations can scarcely be overestimated. Not only do Sweet Peas give us considerable joy in the garden and home; the growing of seeds in this country is now a large industry, providing employment for many thousands; and anything that will enable raisers to put stocks on the market that will not give more than five rogues per thousand will be of inestimable value. The whole of Major Hurst's paper, with the most salient points of the discussion, will be published in the National Sweet Pea Society's Annual, which will be worth buying for this feature alone.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Bracken on Victoria Embankment.—On the north side of the Victoria Embankment wall,



MR. E. BECKETT, V.M.H., HEAD-GARDENER
AT ALDENHAM HOUSE, ELSTREE.

(See page 541.)

facing Northumberland Avenue, may be seen some small specimens of Fern (*Pteris aquilina*) growing on the east side of the Bazelgette mural monument.—P. CLEMENTI-SMITH.

Tulipa primulina.—It is not quite fair that the primrose yellow form of *T. strangulata*, page 532, October 19 issue, should be called *T. primulina*, as there is a very distinct species described by Baker under that name. It is figured in t. 6786 of the *Botanical Magazine*. It is rather like an enlarged *T. biflora*, and has narrow leaves and slender stems, sometimes bearing more than one flower. It is much more suitable for the rock garden than any form of *T. strangulata*. It was discovered by Mr. Elves in the Aures Mountains in Eastern Algeria in 1882.—E. A. BOWLES.

Crab Apples as Ornamental Shrubs.—I was much interested in one of the leading notes on Crab Apple Veitch's Scarlet in the issue for October 12. I have had no experience of the variety named, but, judging from the description given in the note referred to, it is a beautiful one, and should have a prominent place in gardens. In Mr. Rolls' garden at Arcadia, Bournemouth, Crab Apples are made good use of in the borders, being grown among the shrubs, where their highly

coloured fruits show to great advantage. The variety John Downie has done remarkably well so grown. The trees are trained as slender pyramids, and they have been covered with fruits almost from base to top.—G. G.

New Market Chrysanthemums.—Among the smaller exhibits at the fortnightly meeting of the Royal Horticultural Society on the 8th inst. was that of market Chrysanthemums from Messrs. Cragg, Harrison and Cragg, Heston, Middlesex, yet because of their freshness and fine quality it was also one of the most attractive. There were several vases, each containing about a dozen flowers with nothing but their own good attributes to recommend them, though these were all-sufficient in the circumstances. The new single-flowered Celia (illustrated on page 539), of rich golden yellow, was particularly good and striking in colour and get-up, and well deserved its award of merit. H. W. Thorpe, a fine incurved white, was superb, its crisp petal denoting good keeping qualities. Cranford Yellow and Cranfordia (yellow) were very fine. Phœbe was excellent in mauve pink. The greatest colour novelty, however, was seen in Juliet, a decorative variety of dull reddish walnut tone, quite unique in its way.—E. H. J.

The Twelve Best Climbing Roses.—I think that possibly even a rosarian would accept a "dressing" from such an acknowledged authority as Mr. Herbert E. Molyneux. I asked for the opinion of others as to my selection of the twelve best climbing Roses, and therefore gratefully accept Mr. Molyneux's criticism. But I think I hardly deserved Mr. Molyneux's caustic remarks as to the failure of many of my selected twelve to comply with my conditions, for reference to my previous notes (*THE GARDEN*, September 21, 1912) will show that I was fully aware of that fact. I am much obliged to Mr. Molyneux for naming three climbers unknown to me, and I will certainly procure those which he so strongly recommends. I wish I could evince my friendly feeling by sending Mr. Molyneux a plant or two of Marie Bret; but as I have only three plants of that lovely Rose, and they were presents, I must content myself by merely stating that they were procured from P. Nabonnand. I must hurriedly conclude by reciting in its more correct form Mr. Molyneux's quotation, *De gustibus non est disputandum*, for I still prefer my list to his.—G. B. W.

Albino Forms of Geranium robertianum.—I am much obliged to your correspondents for their notes on white Herb Robert in response to my desire for information. Unfortunately, they have omitted to mention whether it was the red-stemmed or green-stemmed variety that they have found. I have frequently found colonies of the red-stemmed variety in wild conditions, but never the green-stemmed, and it was in order to ascertain whether the wild origin of this latter form was known that I showed the two forms at the meeting of the scientific committee of the Royal Horticultural Society. Similar forms exist of the white Ragged Robin (*Lychnis Flos-cuculi*). The red-stemmed one I found in the Norfolk Broads, after having kept an eye on the watch for it for many seasons when collecting Lepidoptera among the rosy masses of the type form. The green-stemmed was found in Cornwall, but is not nearly so strong a grower as the handsomer variety with red stems and calyx. In both plants, *Geranium* and *Lychnis*, the two forms breed truly from seed. The red-stemmed *Lychnis* gives a small percentage of pink flowers, but I have never known the *Geranium* to revert.—E. A. BOWLES.

Odontioda Charlesworthii.—During recent years many *Odontiodas* have appeared, but this is still one of the best in commerce. It was derived from the intercrossing of *Cochlioda noetzliana* and *Odontoglossum harryanum*, and is deep blood red in colour. In size, shape and general habit the *Odontiodas*, such as the one just noted and *O. Bradshawiae* (*O. crispum* × *C. noetzliana*), resemble *O. crispum*, and from a horticultural standpoint the scarlet *Odontoglossum* has arrived. This charming set will thrive if given the same treatment as Colombian *Odontoglossums*.—S.

New Zealand Shrubs.—I see *THE GARDEN* regularly, and am always keenly interested in the articles that appear therein. Especially of interest are any notes concerning Maoriland trees and flowers. I notice that a New Zealand shrub was awarded a prize at the big flower show recently. It is amusing to think that this shrub is one that is generally religiously weeded out where it appears in gardens here. Your paper described the flower as being crimson. Is it crimson or a very deep pink? I have seen the latter quite often, but never the former. The white *Manuka* is the most common. It grows all over the country here, particularly on poor lands. Standing on top of any rise, one can see it shimmering for miles. Sometimes the shrub grows to a considerable height, but the flowers are never plentiful when this is the case. In the public domain at Auckland there are preserved some fine specimens of old *Manuka* trees. — *MONA MACKAY, York Street, Parnell, Auckland, New Zealand.* [*Manuka* of New Zealand is correctly *Leptospermum scoparium*. It is regarded as a troublesome weed in some parts of New Zealand, but is, of course, very showy, and is grown here, more especially in gardens of the South-West, as an ornamental flowering evergreen. The new *Leptospermum Nicholii*, which won the cup for the best new plant at the recent International Show, is probably not the plant referred to by our correspondent, but a richer-coloured form of that or an allied species. Apparently some New Zealanders use the name of *Manuka* for all the species of *Leptospermum*, although some authors use it more particularly in connection with *L. scoparium*. The native name of *Kahi-Katoa* has also been applied to it.—Ed.]

FORTHCOMING EVENTS.

October 29.—National Chrysanthemum Society's Show at the Crystal Palace (three days). Kent Commercial Fruit Show at Maidstone (two days).

October 30.—Kent County Chrysanthemum Society's Show (two days). Borough of Croydon Chrysanthemum Show (two days).

October 31.—Torquay Chrysanthemum Show.

November 1.—Hinckley Chrysanthemum Show (two days). Enfield Highway Chrysanthemum Show.

November 2.—Brighton Chrysanthemum Show (two days).

THE ROSE GARDEN.

NOTES ON NEWER ROSES.

HYBRID TEAS.

(Continued from page 529.)

Claudius (B. R. Cant and Sons, 1910).—This is one of the Hybrid Teas that might have been found in the Hybrid Perpetual class, I should imagine, without any injustice being done. It is an excellent Rose, Hybrid Perpetual-like in growth and flower, colour deep rose self throughout of almost uniform character, of good shape, and the flowers are carried erect on good footstalks. It requires thinning, but is quite up to exhibition standard if this is done. Another good point in its favour is its scent, and I see it figures in the raisers' current

effect; the colour-scheme reminds one of the older *Dr. Campbell Hall*, but is, I think, even more pleasing. It has been awarded the gold medal of the National Rose Society, and, with good cultivation, produces a fine flower, but (why is there nearly always a "but"?) it is thinnish and must be cut just right. A good flower. It is one of the most beautiful of Roses.

Cynthia (William Paul and Sons, 1900).—A pale lemon yellow, nearly white, leaning largely to the Tea side of its parentage; of rather unusual shape, which can be described as globular rather than pointed, but none the less pleasing for that. We do not want all our Roses to be after one pattern. Good in autumn, with plenty of petals, and a fair grower.

Coronation (Hugh Dickson, 1912).—I have not yet received a copy of this firm's catalogue, so cannot be sure whether they are sending out this magnificent Rose this season or not, but I would rather not run the risk of leaving it out in case they may be distributing it this year. It is entitled to be called one of the best of the new Roses of 1912, and one can hardly speak too highly of it. I first saw it at the "National" at Regent's Park this year. There it won first prize in a very strong class of baskets for any white or pink, beating some very fine *Druschkis* in the process. The basket was removed to take its place as an exhibit in the class for new seedling Roses, and, as a consequence, upset some of the reports of the show. One gentleman of the Press, overlooking the fact that there might have been a first awarded, proceeded to lecture the judges for only awarding a second to a basket of *Fran Karl Druschki* that was the "finest he had ever seen, and should have been an easy first," &c. In that unaccountable way which cannot be easily explained, it did not catch the eye of the judges of the new seedlings at the "National" sufficiently to obtain an award. At Belfast, however, although I do not think it was a bit better exhibited, it obtained the gold medal, and undoubtedly deserved it. Most Roses have to come up twice before they secure a gold medal, unless they are particularly striking, such as Irish



THE NEW CHRYSANTHEMUM CELIA. A SINGLE VARIETY WITH RICH GOLDEN-YELLOW FLOWERS.

Fireflame, *Rayon D'Or*, or *George Dickson*, and *Coronation*, fine Rose that it is, was no exception. Afterwards, as seen growing at Belmont, it was manifest that no mistake had been made in this case. To adequately describe the flower is not easy. Here again we break away from the high-pointed centre, and *Coronation* is more of the type of *Mrs. Cornwallis-West*, or, to name a better-known but not a better Rose, *Her Majesty*. It is a delicate pale pink in colour, very large. I saw flowers as big as the closed fist of an ordinary mortal. No fault is to be found with its growth. The Rev. J. H. Pemberton was much enamoured with it at Belfast. Whether it goes out this season or not, all exhibitors should make a note of *Coronation* and be sure that they get it, as there is

catalogue at the moderate price of 1s.; so those exhibitors who have not grown it should give it a trial.

Comtesse Icy Hardegg (Souper et Notting, 1908).—A very bright carmine of good shape and growth that, if freely disbudded, will give quite a good flower. It has done very well with me during the past season; it has plenty of petals and it stands well when cut. The colour does not seem to fade so rapidly as is the case with most carmine varieties. A Rose that has been somewhat overlooked.

Countess of Shaftesbury (Hugh Dickson, 1911).—This is a very beautiful colour, not easy to describe—silvery carmine, with a lighter shade at the edge of the petals that heightens the general

effect; the colour-scheme reminds one of the older *Dr. Campbell Hall*, but is, I think, even more pleasing. It has been awarded the gold medal of the National Rose Society, and, with good cultivation, produces a fine flower, but (why is there nearly always a "but"?) it is thinnish and must be cut just right. A good flower. It is one of the most beautiful of Roses.

another Coronation on the market—a pretty wickham of Turner of Slough—that may lead to confusion.

Duchess of Normandy (P. Le Cornu, 1912).—A yellow sport from Dean Hole, exhibited by the raiser at Southampton this year, where it received a card of commendation and might, perhaps, have had a higher award. I was very pleased with it, and I think, due allowance having been made for the Jersey soil, and, further, the Jersey climate, with its almost perpetual sun, preventing that slow development of the bud which is so essential to produce the exhibition flower, it is a really promising sport that should do well in our English gardens. A yellow Dean Hole hardly does justice to its colouring. It is not, at any rate, a yellow self, but has many shades of colour among its petals, salmon and gold predominating. Altogether a beautiful Rose that I expect to see in most exhibition boxes before we are much older. It is being distributed at 5s. each. Duchess of Normandy, by the way, is the Jersey man's title for Queen Mary.

Southampton. H. E. MOLYNEUX.

FLOWER GARDEN.

SWEET PEA NOTES.

A Moseley List.—During the last decade many old-established firms which had not previously devoted special attention to the cult of the Sweet Pea have come within the fold, either because their principals became enamoured of the Queen of Annuals or because it was thought that a little grist might be added to the mill. Why Hallams, Moseley, threw themselves so keenly into the Sweet Pea business I should not like to say definitely, but I do know that Mr. Arthur Hallam is one of the most enthusiastic men in the trade, and that there are few things in connection with it which he does not know, provided that they are worth knowing. This Moseley list is a modest one, and it does not comprise any of the firm's own novelties; but, as far as possible, all the finest varieties raised by others are listed, from Afterglow in the "A's" to Winsome in the "W's."

Edinburgh Sweet Peas.—There are doubtless several seed-houses in Edinburgh selling excellent Sweet Peas, but I dare venture to assert that the brain of every reader of THE GARDEN will picture the name of Dobbie when the heading of this paragraph is seen. In the old days it was Dobbie of Rothesay, but most of us have forgotten that the firm was ever located in that charming spot. The Edinburgh seed is grown in Essex, and the crop this season is a remarkable one, as well for excellence of quality as for abundance. No fewer than nine novelties are listed, and of these two have received

the award of merit of the National Sweet Pea Society, two others have secured the award of merit of the Royal Horticultural Society, while still one more was honoured at the Royal International Horticultural Exhibition—a record for one season of which any firm might well feel proud. There is, however, just one point more to add. Lady Miller is one of the two varieties reserved for the silver medal of the National Sweet Pea Society, provided that they behave themselves properly next season. It is an exquisite Sweet Pea that grows splendidly and produces plenty of fours. The colour is delicate apricot rose on

distinguished approbation of the King. It is the same colour as Lady Grisel Hamilton, but of Spencer form. Brunette is reddish mahogany; at least that is the nearest I can get to the colour. It is distinct and decidedly handsome, even if it has not quite the size of some of the modern giants. Old rose is the colour of Decorator, and it is well named, for it is admirable for the purpose indicated. It will be offered by more firms than one, but the name has met with general acceptance. Lavender George Herbert is Dobbie's special stock of a grand Sweet Pea. Mark's Tey is a weird mixture of maroon, rose, mauve and blue which does not appeal to my particular taste; but this does not alter the fact that it is a fine bold flower of splendid form, produced by a plant which grows vigorously. Inspector is a duplex form of Earl Spencer, and must not, therefore, be exhibited at any show next summer where double standards are strictly taboo. In addition to these the firm offers all the finest Sweet Peas in general cultivation.

A Waterlooville Letter.—Mr. W. E. Alsen, Denmead, Hants, has not yet sent me a copy of his catalogue, but informs me that he will offer Annabel Lee, a distinct lilac which was shown at the "International"; A. A. Fabius, a superb cerise which has been seen before, but has not been satisfactory on account of lack of fixity; and Minnie Furnell, the shrimp pink which is such a warm favourite with the ladies.

HORACE J. WRIGHT.

AN ORNAMENTAL SYCAMORE.

(ACER PSEUDO-PLATANUS ERYTHROCARPUM.)

THE beauty of several Acers, Maples or Sycamores when laden with highly-coloured fruits has been very noticeable in Southern Counties during the present year. The hot summer and autumn of 1911 are no doubt responsible for the freedom with which the Acers have flowered and fruited this year. One of the best of these red-fruited kinds is that named above, which is a form of the common Sycamore. It is also sometimes known as A. van Volxemii variety erythrocarpum. Every branch of the tree was as heavily laden with fruits as the small spray illustrated. Some of



A FRUITING SPRAY OF ONE OF THE SYCAMORES. THE WINGED FRUITS ARE CRIMSON IN COLOUR.

cream. Dobbie's Scarlet is distinct and excellent; indeed, it is a colour by itself, and one which every grower will desire to have in his collection. The flowers do not burn. This firm's strain of Thomas Stevenson was the reserve for this year's medal, but it failed to realise expectations by throwing a rogue. It was hard luck, but does not alter the fact that the colour and form are alike superb, though, in my opinion, no better than those of other strains of the same variety that I have seen on occasions. True Lavender met with the

long, drooping racemes measured a foot in length, carrying thirty to forty pairs of red fruits. Quite a lengthy list could be given of Acers with ornamental fruits. Three others especially worthy of note are the Pilgrim Plane (a form of the Sycamore), the Caucasian A. Trautvetteri and A. insigne (velutinum). These highly coloured and unique looking fruits make a most interesting feature in the woodland during the early autumn months, and for these alone the trees named above are well worth growing.



A VIEW IN THE ROCK GARDEN AT FRIAR PARK, HENLEY-ON-THAMES.

COLOURED PLATE.

PLATE 1457

ROCK GARDENS IN THE MAKING.

THE Editor has commissioned me to write a series of articles on a subject at once fascinating, popular and seasonable, and in such a manner as to afford the general reader some idea of how to get to work and the possible, or very highly probable, results of his labours. Just what the results prove to be will be very much a question of space, of the desires of the individual operator, and not a little, naturally, upon ways and means.

Be the space never so circumscribed, however, or ways and means ever so limited, there should exist in the mind's eye, at least at the start, some sort of ideal—some finality—to which it is desired to attain. Whether this is so in the case of Sir Frank Crisp—the greatest apostle of rock gardening this, or probably any other country, has ever known: his creations at Friar Park have been described as the noblest example of rock gardening outside the Alps themselves—I do not know, since on making enquiries as to where the end was likely to be, the eye was directed to a certain boundary limit where it was intended to stop "for the present." To reach even that provisional boundary, however, the operators have yet to cover an acre or more of ground to bring into position and to render available and congenial for alpine vegetation a few more thousand tons of rock, so welding them together and furnishing them as to constitute one great imposing flank of a still greater, more imposing whole.

Obviously, then, all our rock gardens cannot be of this kind, though they may, one and all, if rightly constructed and fittingly planted, afford pleasure by their presence, while adding variety and charm to our gardens. Those whose privilege it has been to see the wonderful rock garden at Friar Park in the heyday of its summer glory will not require to be told of its beauty, its naturalness, or the wealth of picture-making subjects it contains. Those who have not will be able to get a glimpse of a small portion of it from the coloured plate which is published with this issue. For the rest—the acres of it and the thousands of tons of rock—the reader must for the moment rely on the imagination. To all, however, should be very clear the style of arrangement and the method of furnishing, while the wedding of rock with alpine and alpine with rock is so strong a feature of the picture that it is not likely to be overlooked by those interested in such matters. To render the matter more generally helpful, however, I hope to direct attention to, and drive home if possible, some of the object-lessons this famous garden teaches, since the principles adopted—the essentials in the case—are applicable to all rock gardens, small and large alike.

The Object of the Rock Garden.—Primarily it should exist for the betterment, both as regards display work and cultivation, of that great mass of mountain plant-life we know as "alpine,"

If it fails in these, it fails also in its mission, and might as well be non-existent. In some degree it has, of course, to be admitted that rocks are not essential to the cultivation of many alpine plants, the more vigorous of them, and those of the upland pastures in particular, not infrequently constituting the verdure at one's feet and unassociated with rock. At higher elevations rock and alpine are more general, and, higher still, the one would appear inseparable from the other. It is to these latter that rocks are more or less essential, and to which the richer soils of the garden are not infrequently unsuited because of the greater amount of humus they contain and their imperfect drainage. To such as these, then, the rocks become a sort of necessity. In other directions they are as a means to an end, and favour the bringing together into nutshell form a varied class of vegetable-life having much in common from the cultural standpoint. Quite

good effect. Not only are the plants disposed in a manner consistent with that obtaining in their native haunts, but they are also raised nearer to the line of vision, while separated from those greater dangers of soil, damp and insect-life which continually threaten and not infrequently overwhelm them when grown in the so-called "choice border," whatever that might be. These, then, are some among the more fundamental reasons for the presence of a rock garden on which to grow alpine plants.

E. H. JENKINS.

*(To be continued.)***GARDENS OF TO-DAY.****AUTUMN EFFECTS AT ALDENHAM HOUSE, ELSTREE.**

THE beautiful gardens and pleasure grounds at Aldenham House, Elstree, the country seat



BRIDGE OVER ORNAMENTAL WATER IN THE GARDENS AT ALDENHAM HOUSE.

naturally, this can only be done in a modified degree, since, after all, the rocks play but one part in the cultivation of the plant, although an important one. Away from their native haunts they are bereft of the pure, rarefied air of the mountain, the great elevation and, not least, that Nature-given mantle of snow which is one thing to them in winter and another in summer—a blanket to wrap them while asleep, and a generous supplier of moisture to them in their waking hours.

Notwithstanding these shortcomings, however, the vast majority of alpine plants are amenable to cultivation in British gardens on intelligent lines. It may be on elaborate ones such as those indicated by the coloured plate, or a miniature of them, where similar principles exist as the outcome of thoughtful and careful work from the start.

Then, again, among the foremost reasons which might be given for the presence of rocks is the fact that in no other way can these miniatures of mountain vegetable-life be displayed to such

of the Hon. Vicary Gibbs, are famous throughout the world, principally on account of the rich and varied collection of hardy trees and shrubs that is to be found there, and with which no one is more conversant than the enthusiastic owner, who is always glad to impart his wonderful knowledge to any enquirer. He is widely known as a great exponent of the art of pruning and planting especially, and also of the value of trees and shrubs for beautifying the landscape. The magnificent vegetables that are so well grown and exhibited by the well-known head-gardener, Mr. E. Beckett, V.M.H., whose portrait will be found on page 538, have also made these gardens famous. But in the space at our disposal it is impossible to adequately describe gardens and grounds of such spacious dimensions, and we will therefore confine ourselves to a few of the more important features that we noted when visiting the gardens during the early days of October.

The Michaelmas Daisies.—Although Mr. Beckett has been working for the improvement of these useful hardy flowers for many years, it is only during the last decade that the results of his labours have been brought before the public, and even now we doubt whether the average grower of herbaceous plants realises what a wealth of late autumn beauty is to be found in these much-maligned flowers. At Aldenham, Mr. Beckett has a large border devoted entirely to these, and the illustration on page 543, taken about mid-October, will give at least some idea of their gracefulness and charm, though it entirely fails to depict the many colour gradations and variable outlines that may be found among them.

This border is nearly one hundred yards long, and from 20 feet to 30 feet wide. It is filled mostly with forms of *Novi-Belgi* and *Novæ-Angliæ* for the background, with the small-flowered *ericoides* and *cordifolius* sections in the foreground. In common with most good cultivators of hardy flowers, Mr. Beckett is a firm believer in frequent division of the old plants, and his Michaelmas Daisies are lifted every year during January or February, the soil well and deeply dug and manured, the plants divided, and only the strongest portions replanted. It may be useful to give the names of a few of the best varieties that are to be found at Aldenham, and most of which can now be obtained from many plant nurseries. Among the large-flowered sorts, *Climax* stands out supreme. It is a tall-growing variety, attaining a height of 6 feet or more, and is later in blooming than some. But its blossoms are large and deep sky blue in colour, and may aptly be described as blue *Marguerites*. Mr. Beckett has a beautiful white-flowered seedling from *Climax*, but this is not yet in commerce. It is a gem among hardy plants, and is named *Avalanche*. *Amethyst* is a new one, with rather paler-coloured flowers, the petals of which are long and narrow and slightly twisted, this giving them a very charming appearance. *Attraction* is another large, blue-flowered variety of considerable value for cutting. A variety that particularly pleased us is *St. Egwin*. It has a compact, bushy habit, but the flowers are a delicate shade of rose pink, and it makes a superb feature in the border. *Sirius* is a delightful, tall, erect variety, with semi-double flowers of deep rose colour; for cutting it is ideal. Among the dwarf, early, *Amellus* section, Mr. Beckett has many good varieties, notably *Comet*, with large, deep blue flowers; and *Trumpeter*, with paler blossoms. In the small-flowered *ericoides* and *cordifolius* sections there are so many good sorts that it is difficult to make a selection. The following are, however, all excellent: *Simplicity* (pale lavender), *Perfection* (white), *Daydream* (white), *Little Boy Blue*, *Hon. Viary Gibbs* (old rose colour), *Captivation* (pale rose), *Ideal* (pale blue), *Paragon* (pale blue), *Desire* (white—see illustration), and *Hon. Edith Gibbs* (a well

known and invaluable variety, pale blue in colour). *Cordifolius elegans*—Mrs. Rayner (invaluable for colour), *Little Bo-Peep* (new blue), *Enchantress* (a fine variety), *Freedom* (small white), *White Heather* (new), and *Esther* (dwarf pink).

Ornamental Trees and Shrubs.—In what is known as the wilderness at Aldenham a feature is made of grouping a number of trees and shrubs for summer, autumn and even winter effect, and this might in many open woodland spaces be adopted with equal success. Very large beds, well in keeping with the hounteous proportions of the estate, are planted, each with one kind of shrub, and it may be useful to mention a few of the kinds that

relied upon for next year's display. Then there was *Rosa rubrifolia* trailing over old tree stumps. Its purple hue had departed, giving place to scarlet fruits and yellow colour tones in the foliage. By the side of the large lake, *Cornus alba*, with its crimson foliage, soon to depart and reveal the brilliant red stems that make this Dogwood so valuable for winter effect, was massed with a lavish hand; so also was its variegated-leaved form, which added a touch of silvery sheen to land and water. *Spiræa prunifolia*, with crimson foliage, and red and yellow stemmed Willows all find a home beside the lake, and play their part in a well-thought-out scheme of colour effect for at least three seasons of the year.

Some Autumn Beds.—Though late in the season for bedding effects, there were still some brilliant flowers to be seen. The Fuchsias in particular were excellent, a bed filled with the hybrid *Coralie*, with its large clusters of semi-pendulous, coral red flowers, being particularly pleasing. Then there was the variety *Brilliant*, large plants of it freely bedecked with flowers, with a groundwork of golden-leaved *Alternanthera* and edged with *Echeveria*.

Autumn Roses.—The Rose garden at Aldenham is laid out in formal style, with turf paths between the beds, each of which accommodates one variety. The whole is enclosed in a Yew hedge, so trained and clipped as to form a living wall, with tiered pillars at the corners. This not only makes the Rose garden a secluded place, but protects the Roses from keen, biting winds, which do so much damage in early spring. *General Schablikine*, a Rose that ought to be grown much more than it is, was abundantly clothed with its coppery red blooms. *Coralina*, *Grüss an Teplitz*, *Gustave Regis* and *Papa Gontier* were others that called for special mention as suitable Roses for late flowering.

Rare Trees and Shrubs.—As we stated at the outset, the gardens at Aldenham are rich in rare trees and shrubs, but lack of space forbids detailed mention of these now. We hope, however, at some future time to refer to them more fully, and also to the wonderful *Streptocarpus* that Mr. Beckett has raised during recent years. So extensive are the gardens and pleasure grounds, and so well stocked are they with good and interesting things, that one

would need a whole issue of *THE GARDEN* to merely touch on each section. In spite of natural difficulties in the way of heavy clay soil, Mr. Beckett grows everything well, and the gardener, whether he be amateur or professional, who is privileged to visit the gardens at Aldenham House will find many object-lessons that may well be taken to heart.

By the kind forethought of the Hon. Vicary Gibbs, these gardens are thrown open to the public each Saturday afternoon during August, and, judging by the numerous visitors, this is much appreciated. Genuine lovers of gardens may at almost any time view the gardens by appointment.



ASTER DESIRE, A CHARMING MICHAELMAS DAISY RAISED AT ALDENHAM HOUSE.

were particularly interesting at the time of our visit. *Aronia floribunda*, now referred to by the Kew authorities as *Pyrus nigra*, was resplendent in its brilliant scarlet-crimson foliage, and in places where this had departed one could see the green-coloured stems that would take up their place in the colour effect for winter. *Spiræa Douglasi*, planted very thickly so as to form a mass, was still retaining its pink flower-heads, though most of the colour had departed, while the leaves were a beautiful golden yellow, and would be succeeded later on by the soft brown stems. Early next spring these will be cut down close to the ground, and the young growths that spring from the base

THE FRUIT GARDEN.

THE BEST PEARS AND THEIR CULTIVATION.

THE question of growing Pears is one that should always be approached with some humility. The fickle nature of this fruit, so easy to cultivate in some respects and so difficult in others, makes it a pleasurable problem. It is somewhat of a conquest to bring to the fruit-room a collection which will carry the Pear season on to April or May, but it demands something of genius to send them all to table in the best condition. To many this difficulty makes their cultivation more interesting, and for the others there are sorts which will do remarkably well with less careful study.

The Best Soil.—The general remarks in a previous article, page 479, issue September 21,

pyramid and bush forms, and where decorative trees are not required, no form is better than these or the slight modifications known as the vase or goblet trained—terms which explain themselves. The tendency to overproduction of spurs must be kept in check, or a dense mass of foliage alone will result.

Why Pears Fail.—The reasons why Pears fail in many districts and in some hands are many, but among these I may mention the following: When bloom is plentiful and fruits few, the Pear midge may be suspected. Examine young fruits and, if they contain some small, white maggots, gather and burn all affected fruits and dress the ground with kaintit. Or it may be that, if only one variety is grown, it is self-sterile and requires pollen from another to fertilise it. The remedy is obvious. Cracked fruit is caused by the black scab (*Fusicladium dendriticum*),

left on the tree as long as they hang firmly; but the earlier sorts must not be allowed to turn yellow, and should be gathered even when they part unwillingly from the tree. The failure of late Pears to ripen is nearly always due to either lack of sun or water or to early gathering. It is a frequent mistake to place late Pears on a north or east wall and the early ones in more sunny positions. Reverse the positions, water the later sorts freely, thin out the foliage round the fruit, and you will be repaid.

The Best Varieties.—The varieties to choose from approach in number the sand of many seas. A German book is on my table describing 1,040 varieties. Most of us will, however, be content with fewer than this number! To start the season the old Jargonelle has stood the test of three centuries, and still remains one of the best. Doyenné d'Été, though small, is a free bearer



A BEAUTIFUL AUTUMN BORDER. MICHAELMAS DAISIES GROUPED FOR EFFECT AT ALDENHAM HOUSE, ELSTREE.

as to planting fruit trees need not be repeated here, and it is only necessary to qualify these in so far as soil is concerned. The ideal soil is a deep loam or brick earth on a subsoil which retains a supply of water. The Pear is perhaps more often starved from lack of water than want of food. The use of the Quince stock, however, makes it possible to grow the trees on shallow soils, and is thus of the greatest importance for this purpose, also for inducing earlier bearing, so that we now may plant Pears without a single wish to benefit posterity.

Pruning.—In the matter of pruning, no tree is more long-suffering. It will stand up to the most desperate pruner and give him a chance to repair his errors. It submits to the restriction of training very readily, and as horizontal, fan-shaped and double cordons is most valuable. Its natural conical habit renders it *facile princeps* for the

and unhealthy roots and unkindly subsoils are a contributing cause. Gather and burn affected fruits, and prune out all wood which shows the ruptured bark so characteristic of this disease. Lack of flavour may be due to want of proper pruning. Pears refuse to develop their best fruits under a dark mass of leaves. Let in the light and air. Again, it may be that persistent nitrogenous manuring causes rank growth, and in this case stop the offending cause and apply basic slag in the autumn and a lighter dressing of superphosphate in the spring.

When to Gather Pears.—A most frequent complaint is of fruits rotting at the core. This is also caused by too much nitrogenous manure (or overdoses of water) and gathering too early. All early Pears must be gathered before they are ripe, a fact that cannot be too often repeated or with too much emphasis. Late Pears must be

and quite good for its season. In September comes the favourite Williams', needing no recommendation and merely a caution that its flavour must not always be judged from fruit sold under this name. Souvenir du Congrès follows, and is of first-class quality, with melting flesh. Marguerite Marillat comes between the last two named, but is rather more for the show than for the dinner table. October and November bring in so many fine sorts that selection becomes more than usually difficult.

Considering cropping powers first, we must admit Conference and Durondeau, both of which are good, and the former an example to all Pears in the matter of regularity of fruiting and freedom from disease. Beurré Hardy also fulfils the promise of its name, and adds to this quality good appearance and flavour. To these we must add Marie Louise, Louise Bonne of Jersey and Emile d'Heyst,

old and well-tried favourites. On the *bonne bouche* principle I now cite the Queen of Pears (the feminine gender always seem appropriate in this connection), Doyenné du Comice. To paint the Lily or add flavour to the Comice are tasks of equal undesirability.

The Christmas dessert will be supplied by Winter Nelis (for those in warm climates), and the new Santa Claus is a visitor who bids fair to be as welcome and as universal as his namesake. Of the after-Christmas Pears, Olivier de Serres, named after the great French agriculturist, is, despite an unpromising exterior, most excellent in flavour and a fertile variety, and Josephine de Malines will carry the Pear season into March. If another variety is wanted, the claims of Duchesse de Bordeaux should be carefully considered. A word as to cooking Pears. In my opinion none equals *Bellissime d'Hiver*. It lasts long in season, often till April, and its freedom from grittiness is not the least of its virtues.

EDWARD A. BUNYARD.

THE GREENHOUSE.

BEAUTIFUL WINTER GREENHOUSE FLOWERS.

(BOUVARDIAS.)

THE different Bouvardias form a delightful race of flowering plants for the greenhouse, among their prominent features being the fact that they are at their best during the autumn and early winter months, and that they possess a certain air of refinement and are, consequently, worthy of association with any other flowering subjects, however choice. In my young days a cluster of Bouvardia was considered to be an ideal button-hole flower; now, however, the flowers are not large enough to satisfy the votaries of fashion, but there are still some who decline to follow the beaten track, and prefer a small or medium-sized flower.

Apart, however, from any consideration as a cut flower, neat, bushy plants of the different Bouvardias are exceedingly valuable for the embellishment of the greenhouse, where they retain their beauty for a considerable time. Their culture is not at all exacting, as a few old plants put into a gentle heat early in the year will push out a quantity of young shoots, and these, when from $\frac{1}{2}$ inches to 2 inches long, form the best of cuttings. In fine, sandy soil they will quickly root in a close propagating-case, when they must be potted off and shifted into larger pots when necessary. They should be occasionally stopped in order to induce bushy plants, while a liberal proportion of leaf-mould in the potting compost is all in their favour. Pots 5 inches in diameter are large enough to accommodate plants struck from cuttings in the spring, but, of course, older ones may be grown in pots much larger than that. For many decorative purposes, however, 5-inch pots are quite large enough.

At one time Bouvardias were often planted out during the summer months, and lifted and potted before flowering. This practice is not so much carried out as it formerly was, prominent objections to it being the fact that it was necessary to employ somewhat large pots, otherwise the leaves were liable to suffer. Besides the young shoots, Bouvardias can be propagated by root-cuttings, and they were at one time extensively treated in this way, but it is not now much employed. A curious feature is that plants from root-cuttings are, if the variety has been obtained from a sport, occasionally liable to revert to the typical kind. This was first brought home to me in a very unpleasant manner, for when the double white variety Alfred Neuner was sent here from the United States, just over thirty years ago, I, being anxious to obtain as large a stock in as short a time as

Cleveland, the best of its colour, a vivid scarlet; Priory Beauty, deep pink; and Pride of Brooklyn, a better white than *Vreelandii*. The large, pure white, deliciously-scented *B. Humboldtii corymbiflora*, which may be had in flower in the summer, must on no account be passed over in any selection of the very best kinds.

H. P.

CATALOGUE ILLUSTRATIONS OF BULBS IN POTS.

THE custom of issuing well-got-up catalogues with illustrations of many of the bulbs therein offered for sale is becoming more general. Very many nowadays contain pictures of the whole plants as they are grown either in pots or bowls. It is of these I feel constrained to make a few remarks. Some must surely be put in as awful examples of how "not to do it." Can anything be more spoiling to the natural beauty and gracefulness of the Daffodil than some of those overloaded and over-flowered potfuls, which may be wonderful examples of culture and well-prepared bulbs, but which also indicate that this or that particular gardener's skill has, alas! got the better of his taste.

I have picked out the illustration shown as being one of the best-got-up of its kind that it has been my lot to come across. If each compiler of catalogues and every reader of *THE GARDEN* will only copy the spirit of this bowl of *Campernelle Jonquils* when they are potting their bulbs, I am sure they will be very pleased with the results next spring; hence my first bit of advice, "Don't overcrowd."

Another point of considerable importance is the height of the receptacle in which to grow the plants. It has been abundantly demonstrated that for decorative purposes nearly all bulbs will do as well in shallow pots as in the old-fashioned deeper ones. To my mind there can be no question which is the more pleasing, and as I have said more than once in *THE GARDEN* pages, I have taken almost entirely to the former. So my second wrinkle is, "Use shallow bowls or pots."

Again I would ask readers, if they have not already done so, to notice the difference in the look of perfectly plain bowls and those with



A BOWL OF CAMPERNELLE JONQUILS WELL ARRANGED FOR EFFECT.

possible, struck a number from root-cuttings. When these flowered many of them reverted to the single *Davisonii*, from which Alfred Neuner originated as a sport, whereas all those struck from the young shoots retained their double character. Some of the best varieties include: With double flowers—Bridesmaid, bright pink; Hogarth *flore pleno*, rosy scarlet; President Garfield, soft pink; Victor Lemoine, scarlet; and the white Alfred Neuner, above alluded to. With single flowers—Dazzler, scarlet; Hogarth, soft scarlet; *jasminiflora alba odorata*, white, with a reddish tinge at the backs of the petals, deliciously scented; *jasminiflora paniculata*, pure white; King of Scarlets, a large flower, scarlet, with white tube; Mrs. Robert Green, soft salmon pink; President

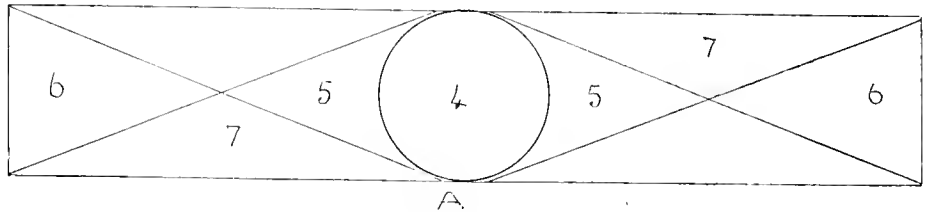
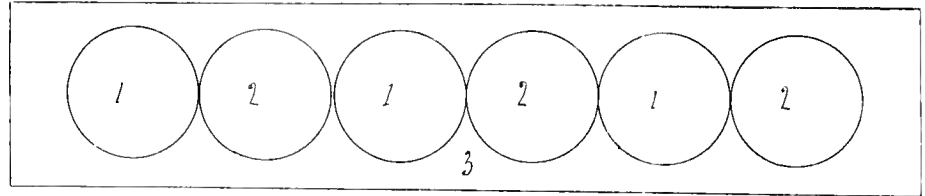
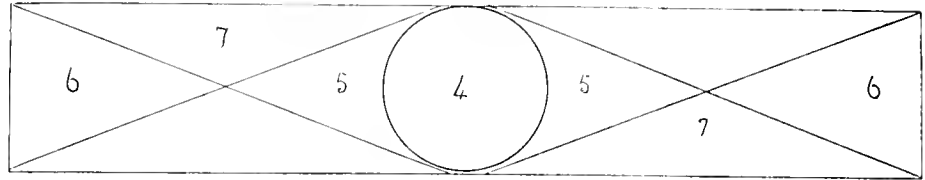
some ornamentation either in colour or in an embossed pattern. Speaking generally, I feel there can be no comparison between the two. The plain are so much nicer and set off their contents so much better. After a good deal of consideration and observation I have decided in my own mind that the best colour of all is a dull brown, not only for bowls, but even for pots. What is known as Silchester ware is the sort of thing I mean. I am having some made for me this year, and, as I am daily expecting them, I shall be able to grow a more varied collection than I have hitherto done. In the spring I hope to report. Thus the third and last point that I would urge on "potters" is, "Use as plain and unornamented bowls or pots as possible, and try those coloured brown." JOSEPH JACOB.

GARDENING FOR BEGINNERS.

SIMPLE BEDS OF BULBS AND OTHER SPRING FLOWERS.

THERE are many kinds of spring-flowering plants that may be associated with bulbs, the beauty of the flowers of the latter being much enhanced by the close proximity of the other kinds of flowers. The spikes of the bulbs, especially those of Hyacinths, Tulips and Narcissi, grow a fair height above the soil. The growth of many kinds of hardy spring flowers is, in comparison, dwarf, so that the latter may be used as a groundwork to the taller flowers or as a bordering to the various beds. The beds shown in both A and B designs are suitable for planting as separate borders in any garden, on a small or large scale, and, of course, the whole design in each case may be used on a lawn or cut out, edged with tiles and gravelled between.

Effective Ways of Planting the Beds.—The long central bed may be filled as follows: Nos. 1 1 1, Hyacinth La Grandesse; Nos. 2 2 2, Hyacinth Roi des Belges (dark red); No. 3, entirely filled with *Aubrietia deltoides* (lavender blue). The whole bed would thus show the colours red, white and blue. No other bordering would be needed, as the *Aubrietia* would form it in the way of a carpet bordering. Where the three sets of beds are planted close together, as drawn, the two outer ones may be filled as follows: Nos. 4 4, Tulip Keizerskroon, scarlet, with yellow border; double white *Arabis* as a groundwork. Nos. 5 5, Tulip Queen of the Netherlands, blush colour; *Aubrietia Leichtlinii*. Nos. 6 6, Tulip Duchess de Parma, orange red, yellow border; groundwork of white *Arabis*. All other divisions, Nos. 7 7 7 7, filled with Hyacinths King of the Blues and L'Innocence, blue and white respectively, and single-flowered *Arabis alpina* as an edging only, but not as a groundwork for all the Hyacinths. No. 1 design, B, may be filled with Hyacinth *gigantea*, or *Norma* or *Moreno*, all pink-flowered, and *La Grandesse*, white, with a groundwork of *Forget-me-not*, or an edging, No. 2, of the latter plant. Nos. 3 3 and



EFFECTIVE WAYS OF PLANTING SPRING FLOWERS.

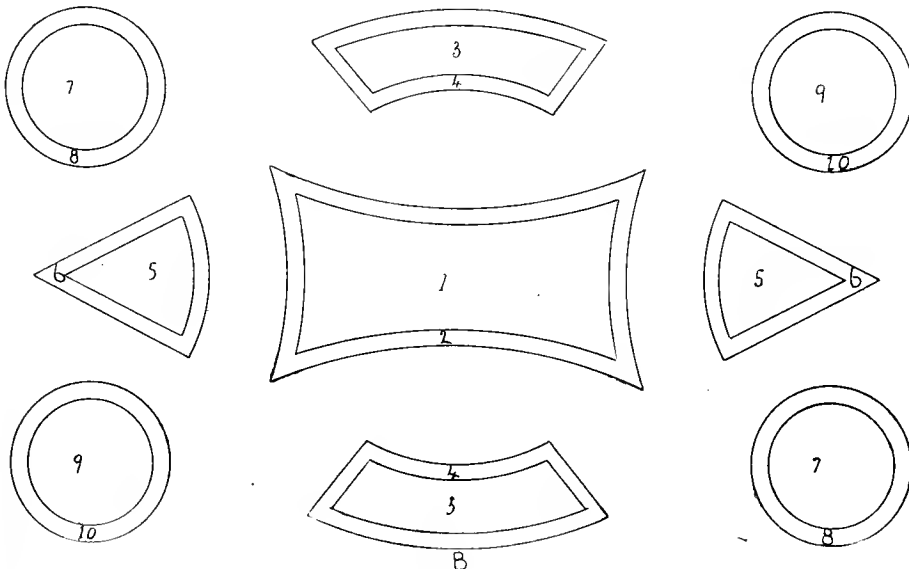
Nos. 4 4, Tulip *Dusart*, dark red, and *Arabis alpina*, respectively; Nos. 5 5 and Nos. 6 6, Hyacinth *Grand Maitre*, light blue, and single-flowered *Arabis*, respectively; Nos. 7 7, Tulip *Mon Tresor*, yellow; Nos. 8 8, *Aubrietia Crimson King*, dark red; Nos. 9 9, Tulip *Rose Gris de Lin*, a pale rose; and Nos. 10 10, *Silene pendula compacta* or *Silene acaulis*, both pink-flowered.

The Soil and the Planting.—As it is not desirable that the groundwork plants should be very gross in growth, manures must not be applied to the soil in such a way that their roots will come in direct

contact with it long before the flower-buds are formed. The necessary rotted manure must be dug in very early before the bulbs are planted. The surface or groundwork plants must be put in first. Where bulbs are associated with other kinds of plants, it is well to allow them more space than in cases where they alone occupy the beds. The surface plants must be put in far enough apart to allow of due expansion of growth without overcrowding. These should, when in full bloom, form a dense carpet or a compact edging, as the case may be. G. G.

SEDUMS FOR THE ROCK GARDEN.

SEDUMS are most useful plants for the rock garden, and there are many beautiful species and varieties. The various tints of foliage make them most interesting plants to study during the winter, and when in flower during early autumn there are no plants which give a more charming effect. I will name a few of the best in the mossy section, which may be grown in the rock garden as wall plants, or any place where the roots can obtain a foothold: *Minima*, the flowers of which, greyish white, are produced so freely that they nearly hide from view the tiny glaucous foliage; *glaucum*, flowers white, glaucous foliage; *hispanicum*, pinkish flowers; *Lyidium*, pink; *spathulifolium*, yellow flowers, the foliage very pretty, of fleshy habit, but compact and close-growing; *anopetalum* I am including among the mossy section on account of its close-growing habit—the flowers are a beautiful pale pink; *boloniense*, yellow; *virens*, yellow; *album*, white, very pretty; *turgidum*, creamy white, a neat-growing variety; *Willisii*, white, star-like flowers; *maweanum*, yellow; *grandiflorum*, a very pretty yellow variety; and *sexangulare*, a neat-growing yellow kind. These are about the best of the mossy section. J. L. E.



SIMPLE DESIGNS FOR SPRING BEDS AND BORDERS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Autumn-sown Sweet Peas.—The sowing of these in pots to be wintered in a cold frame for planting out early in the New Year should now be done. The practice is very similar to that of spring sowing, but by this method considerably earlier supplies of flowers will be obtained. Select, if possible, a shallow frame and one with a firm bottom of ashes. When the seedlings are up, remove the light on every favourable opportunity, taking care to protect the plants from sparrows.

Shrubs for Bedding.—Where the use of other material for enlivening the beds during winter and spring cannot be used, such as perhaps low, shady positions, an excellent effect can be had by planting small shrubs in variety, both evergreen and a few deciduous, and these are at once attractive and continue so the whole time. For this purpose there are many subjects that can be utilised, and a few should be propagated or secured each year, so that the larger ones may be worked out on to the shrubberies. A few of the things that may be used are various Hollies, Cupressus, Osmanthus, Phillyreas, Andromedas, Aucubas, Box, Ericas, Euonymus, Pernettyas, Skimmias, Veronicas, Laurustinus and Vincas.

The Rock Garden.

Fallen Leaves.—Not only for the general appearance, but also for the benefit of the plants, it is important that the plants and rockery be kept clear of fallen leaves, otherwise when these commence to decay much damage may arise to the more tender subjects. Continue to remove any exhausted growth, and make the appearance of the whole as pleasing as possible. It is at this season when our lesser shrubs and foliaged plants are appreciated.

Protection.—Possibly many plants are not sufficiently hardy to stand several degrees of frost, and therefore temporary protection must be afforded them. This is much preferable to covering the plants entirely, excluding all light for two or three months. One of the best means and the neatest is the use of small pieces of Spruce boughs, which can be pointed and put in on the coldest side of the subjects. Others less hardy may be completely enveloped with them. For low-growing, dwarf plants we use small cages of coarse wire-netting and pack them with a little dry Bracken, while a covering of cinder-ashes over the roots will be found an excellent protection both from cold, damp and slugs.

Plants Under Glass.

Carnations.—The Tree Carnations should by now be commencing to flower freely. The plants will need occasional tying and the yellow leaves removed. Give the surface soil a pricking over and sprinkle a little artificial plant food specially recommended for them. The plants, to continue healthy and throw strong shoots, must have free ventilation, accompanied by just a little heat, and a night temperature as near 50° as possible will be found about right. Water as often as required, and assist the plants with applications of weak liquid manure.

Primula kewensis.—This plant will be better if housed, as it is liable to injury from frost unless well protected in the frames. Water carefully and assist the plants by the use of a little stimulant. For winter and early spring flowering it is an excellent subject.

Gladioli.—For greenhouse decoration in the spring the Gladioli are indispensable, and a supply of suitable varieties may now be potted up into 5-inch and 6-inch pots. Use a light and rich compost, place the corms just under the surface fairly close together, and treat as advised for Freesias. For this treatment The Bride (pure white) and Blushing Bride will be found admirable.

Chrysanthemums.—The large blooms this year are not quite as satisfactory as usual, owing to the inclement weather experienced during the summer, and many are very late. Endeavour to make the display, however, as attractive as possible by grouping the plants together. Give sufficient water when in flower to prevent excessive dryness, and air freely during the warmest part of the day.

The Kitchen Garden.

Asparagus.—The growth on the beds will now be sufficiently ripe for cutting down, removing it to a vacant piece of the garden and burning it. During frosty weather cover the beds with a little decayed farmyard manure, first removing all weed growth.

Winter Greens.—Keep the ground clean among these plants, and remove any bottom foliage that shows signs of decay. Make the plants well firm, and do the best to get them hardy before severe weather sets in by a free circulation of air and sun.

Cabbage.—Plant another batch towards the end of this month, and draw a little soil up to the earlier plantings as a protection. Plant just as thick again as the plants are to remain.

Fruits Under Glass.

The Orchard-House.—The majority of the pot trees of Apples, Pears, Cherries and Plums ought by this date to be completed with regard to potting or top-dressing, whichever is necessary. The staple portion of the soil should be the best fibrous loam, to which add some lime rubble and oyster-shell (particularly for stone fruits), a little soot, wood-ashes and crushed bones. Pot firmly, not too deeply, and well water in. If top-dressing only is necessary, see that the drainage is perfect before adding new soil.

The Water Garden.

Autumn Effects.—The value of the various water-side plants is now apparent, and any alterations to be made when growth is removed should now be noted. The Typhas, especially the small one, *T. angustifolia*, is very attractive, as is also *Phragmites communis*, *Cyperus longus*, *Glyceria spectabilis* the giant Water Dock, *Miscanthus* and *Eulalia*.

Water Lilies.—These are best planted in April, though, of course, planting may be done very much earlier. Before growth dies down completely, however, mark the spots where the plants are, otherwise it will be difficult to locate them. Large clumps that have to be curtailed may be pulled out now and re-divided if necessary, as it is much easier to see when the whole of the stool is removed.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Curbing Roots.—Where herbaceous borders are backed by hedges, Rose-covered trellises, or by climbers, the roots, if not checked periodically, rob the soil of its fertility. By cutting the roots almost close to the plants—I cut those of hedges perpendicular to the inner face—this does no harm.

How to Do It.—It is a very simple operation. A narrow trench the width of a spade and a few yards in length is thrown out at one end and deep enough to allow the spade being forced down to cut the lowest roots. A second stage of the trench is thrown into the first and the roots similarly treated, and so on to the other end, the open space being filled with the soil thrown out at the beginning of the operation.

More About Herbaceous Borders.—If there is not time to lift the plants, cultivate the soil and replant. The borders should be dug and some rotted manure worked in, reducing the dimensions of those plants which are overgrown. It harms no plant to cut its roots with the spade in the course of the work, and it is preferable to dig the border at this period rather than in spring, the labour involved being little more than that required to rake and clean off the surface rubbish which is buried in digging.

Hollyhocks.—Seedlings in too small pots to stand over the winter should be transferred to larger ones without further delay. Scarcely any water will be needed if the plants are wintered in a cool, dry structure, but roots will be formed and the plants much strengthened. Dusting with flowers of sulphur will keep the foliage free from Puccinia, which sometimes attacks it at this season.

Shrubs.

Planting.—Most of the replanting of choice shrubs should be finished forthwith, staking them as the work proceeds.

Their Hardiness.—Several notes have appeared on this point, and it may be remarked that a particular shrub may be cut to the ground or even killed in one particular spot, while in a more sheltered position and drier soil the foliage will not be so much as harmed. This, no doubt, is an effect of the quality of the roots, because it is found that a specimen of the same kind that has been recently transplanted weathers a severe winter when plants which have been undisturbed for years are either crippled or destroyed.

Shrubs that are Hardy.—*Choisya ternata* in various positions is much hardier than a common Laurel. *Cercidiphyllum japonicum* is also hardy, but does not colour so well here as in the South. *Nandina domestica* is not only hardy, but flowers annually. *Colletia* is also hardy and flowers sometimes bi-annual, and *Azaranic rophylla* fruits in the open, while *Piptanthus*, *Garrya* and *Carpenteria* are fairly hardy even in elevated parts. Probably these and other plants from warm climates become acclimatised in the course of years.

The Plant-Houses.

Cyclamen.—The old plants now in frames may be transferred to pits, where they will progress better. At the same time, if space is limited, they can be left for some time longer in a dry frame, giving them the minimum amount of water to make sure that the stalks of the flowers do not rot. See that seedlings are carefully watered, and yearlings coming into flower may have manurial aid.

Liliums.—Any unflowered speciosums still standing outdoors should be placed in a slightly warm temperature, in which the flowers will open kindly. Others that have finished growth should be stored in a frost-proof building and allowed to rest till the bulbs exhibit signs of activity in spring.

Dendrobiums.—Deciduous species which have finished growing should be placed in a cool, dry house where they can get a long rest. The stronger-growing kinds usually want staking anew, but the number of stakes may be considerably reduced by tying a number of growths to one stake or to each other.

Schizanthus.—These will be in a condition for repotting into 5-inch or 6-inch pots. Clarkias require much more root space, but if not forward enough they may have an intermediate shift. These succeed very well in an ordinary Carnation-house, the temperature and manner of ventilation suiting them very well.

The Fruit-Houses.

Bottling Grapes.—Some of the Vines, such as Muscats and Alicantes, which are fully matured, can now be relieved of their crop. A dry room where the temperature can be kept from varying without the employment of much firing suits them very well. Frequent examination of the clusters is important to keep damp from spreading from berry to berry.

Pot Trees.—Those not yet potted up for the year should now be either repotted or surface-dressed and the drainage renewed; then placed out of doors as advised in a previous calendar for Peach trees. As soon as all the foliage is off, they may be sprayed to destroy any parasites and their eggs.

Peaches.—The latest fruits will ripen all the better with pipes heated to sweeten the atmosphere and to keep the temperature about 45° to 50°, so as to ensure flavour. The fruits ripen very slowly, but must be frequently examined, and those approaching maturity removed and ripened off in a warm room.

The Vegetable Garden.

Cabbage.—The larger plants of the autumn planting will be improved by drawing a little earth up to the stems and loosening the soil between the rows of all. Wimmingstadt is now producing, and should be used up before the Drumhead section, which stands the winter better. Stir the soil well among Coleworts which are backward, and those that are turning in pull up with a twist so as to keep the quarter tidy.

Endive.—Where this vegetable is in request, enough to meet the supply for five or six days should be put into the Mushroom-house at intervals. Lifted with a ball of soil attached, they may be set close together on the floor of the house, and need no more attention till ready for use. The latest batch growing outside should be transplanted into cold frames.

R. P. BROTHERSTON.

Fynninghane, Prestonkirk, N.B.

TREES AND SHRUBS.

THE BEST SHRUBS FOR FORCING.

PEOPLE who wish for a good supply of forced shrubs for winter and spring would do well to commence their preparations without delay, for the best results are obtained from plants which are potted at once, because the roots are still active and the plants become well established before winter sets in. No doubt in many gardens this important work has already been done. Where alterations to shrubberies and beds of shrubs are contemplated, it is sometimes possible to select suitable subjects for forcing from among the surplus plants, but the most satisfactory results are usually obtained from plants which have been grown specially for forcing. The size of the plants required has, of course, to be taken into consideration, and when they are to be used for decorating large rooms, the bigger and older ones from the shrubbery have the advantage; but as a general rule well-grown nursery stock is quite satisfactory.

When shrubs are being grown specially for forcing, care is taken to foster the production of the maximum amount of flowering wood for the size of the plant; therefore all useless, weak branches are cut away during summer, so that the whole energy may be concentrated upon the production of good, vigorous shoots. In the case of Lilacs and a few other subjects, this thinning process has the effect of making the plants somewhat straggly in habit; that, however, cannot very well be helped if flowers are to be the first consideration. As a rule, it is as well to lift the plants from the borders, pot them at once, and then plunge them in ashes out of doors until required for use. Should a frosty time be experienced in winter, dry leaves or hay spread over the surface of the ashes makes it possible to remove the pots from the plunging material at any time when the plants are required for the forcing-house.

A great many shrubs are grown specially for forcing in some Continental nurseries, and they are sent to the British Isles in large numbers during autumn; but some nurserymen in this country make a speciality of growing shrubs for the work. Twenty years ago comparatively few kinds were considered suitable for forcing, but of late years many more have been requisitioned. Of those most suitable for the purpose, the following selection has been made:

Wistaria chinensis.—This is one of the most beautiful shrubs imaginable, for the large racemes of fragrant mauve flowers are borne with great freedom. Moreover, it is one of the plants which may be grown in pots and forced for several successive years.

Robinia hispida inermis is another excellent shrub for the purpose, for its large, rose-coloured, Pea-shaped flowers are very attractive.

Forsythia suspensa is, in a way, as valuable for greenhouse as it is for shrubbery decoration, for it forces easily, and may be had in flower from Christmas onwards. Large bushes lifted from a shrubbery blossom well.

Spiræas are also useful, such kinds as *arguta*, *confusa*, *prunifolia flore pleno* and *van Houttei* being the best. These are all white-flowered, and the blossoms are borne in profusion.

Prunus japonica flore pleno and *P. triloba flore pleno*, the former white, the latter pink, are popular shrubs which may be depended on to flower well; while any of the double-flowered

Peaches, more especially the red ones, are excellent when large plants are required. They may, however, be obtained as quite dwarf plants, but such are less showy than those of natural growth.

Staphylea colchica.—The flowers of this and *S. Coulombieri* come quite white when forced, and, as the inflorescences are large, well-flowered plants are very attractive. Although not generally forced, the double-flowered *Kerria japonica* is excellent for the purpose, while *Berberis Darwinii* may also be used. Various Crab Apples are grown as dwarf plants for forcing, such kinds as *Pyrus floribunda*, *P. Scheideckeri* and the double form of *P. spectabilis* being specially valuable.

Magnolia stellata, *M. conspicua*, *M. soulangeana*, *M. Lennéi* and *M. rustica* are all worth consideration, the first-named by reason of its glistening white star-shaped flowers, and the others on account of their large cup-shaped, fragrant blossoms.

Diervillas (Weigelas), such as *Eva Rathke* and *Abel Carrière*, blossom profusely if brought on gradually, but they object to violent heat in the early stages.

Lilacs of various kinds are very serviceable, those known as *Charles X.* and *Marie Legrave* being two of the best. When selecting Lilacs, care should be taken to choose those with a few strong growths, rather than those which are made up of a large mass of small branches, for the latter rarely bloom satisfactorily.

Deutzia gracilis has long been popular for spring use on account of its graceful habit and white flowers. *D. Lemoinei* is also useful, while the various varieties and hybrids from *D. discolor purpurascens* may be requisitioned.

Azaleas.—Of the various hardy Azaleas, those of the mollis class are perhaps the best, although they lack the fragrance of the American kinds. For quantity of flowers and richness of colouring they are, however, unequalled.

Evergreen Rhododendrons need to be selected with care, for all do not force equally well. Probably the best of all for forcing is *R. nobleanum*, for it may be obtained in flower from Christmas onwards. Any kinds which bloom moderately early, however, may be tried; but it is not advisable to force any of the late May and June flowering sorts. Dwarf growers, such as *R. præcox* and *Rosy Bell*, are excellent for the work.

Other shrubs, such as *Kalmia latifolia*, *Zenobia speciosa*, *Hydrangea paniculata grandiflora* and *Cytisus præcox*, are also available, but they cannot be depended on to give such good results early in the year as those previously mentioned. W. D.

THE EDITOR'S TABLE.

October Flowers from a Sussex Garden.—A box of hardy flowers and berried shrubs kindly sent by Mr. J. Comber of The Gardens, Nymans, Handcross, Sussex, serves to remind one of the many beautiful subjects that may be grown in the open for October effect. Among the plants sent were *Habrothamnus elegans*, more correctly known as *Cestrum elegans*, and usually given a position under glass; *Eugenia apiculata*, sometimes met with under the name of *Myrtus Luma*—the sprays sent were literally smothered with creamy white flowers; *Polygala mixta*, with Heath-like foliage and small pink flowers; *Billiarderia longifolia*, with shiny purple-black berries; *Eupatorium weinmannianum*, with large heads of dull pink flowers; the sky blue *Lathyrus pubescens*;

Euonymus alata, with bright red autumn foliage; *Cyrtilla racemiflora* and *Erica ciliaris*, completing a most interesting collection, particularly for the time of the year.

Carnations from Enfield.—Messrs. Stuart Low and Co., Bush Hill Park, Enfield, send flowers of some of their new Perpetual-flowering Carnations, which are very good. Among them we were particularly pleased with *Cinnabar*, a very fragrant flower of cinnabar red colour; *Benora*, a large, exquisitely-shaped variety, white, striped scarlet; *Rosette*, bright cerise, with large, full flowers; and *Baroness de Brien*, a glowing shade of salmon pink. This last is a particularly large flower. All those named have long and very stout stems, and the calyces are sound.

Primulas from Duns.—Dr. Macwatt sends from his garden at Duns, N.B., a wonderful collection of Primulas for the time of year. Among them were some particularly fine examples of the gold and silver laced Polyanthuses that used to find such favour with florists. Primroses of nearly all colours, including some extra good blue ones; a number of beautiful double varieties, together with such species as *Julie*, *Listeri*, *vittata*, *japonica* and *altaica*, all added their quota of beauty and interest to this contribution. We must also mention the fine forms of *P. obconica* that Dr. Macwatt included, the white and blue varieties being particularly pleasing.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

TO DESTROY BEARBINE (J. H.).—If your ground is fairly clear of everything else, you cannot do better than trench it and pick out every piece of the weed you can find. Pieces are sure to be left, but a sharp look-out must be kept, and as soon as any growths appear above ground they must be destroyed. By repeatedly hoeing the weed it can be killed in time; but you cannot be sure that you have cleared the ground for several years, whereas by trenching and picking out the underground stems you make sure of killing by far the greater proportion. When it is growing in hedges or among shrubs, the only plan is to keep pulling the shoots up as they appear above ground. This will in time weaken and eventually kill the weed.

MARCHANTIA AMONG ALPINE PLANTS (J. J. R.).—You ask whether "some chemical would eradicate this without injuring alpine plants," and the answer is "No!" What would be death to one of the lower forms of vegetable-life would be death also to other forms a few degrees removed. If this vegetable pest is present to an injurious extent among alpine plants, we can only suggest two ways of coping with it, viz., preventing its maturing spores giving a fresh crop, and frequent disturbance, using a pointed stick to dislodge it, and burn it. Should it exist in any get-at-able place, a strong solution of salt and water might be applied with a small paint brush, but the solution must not touch the plants or be in sufficient volume to reach their roots. Generally speaking, its presence is indicative of much moisture or shade; but as you say it thrives in sun or shade, you appear to be badly circumstanced. Try the pointed stick arrangement and persevere. The plant detests interference, though not easily got rid of.

ROSE GARDEN.

ROSE FOLIAGE BLIGHTED (*H. G. R.*).—Your Roses are infested with thrips and Rose sawworm. They should have been sprayed earlier with some good insecticide, such as nicotine wash. We should advise cutting a lot of this blighted foliage off and well spraying the plants afterwards with a solution of Cyllin Soft Soap, obtained from Messrs. Jeyes of Cannon Street, London, E.C. Or you could make a strong solution of Lifebuoy Carbolic Soap and spray well with this on the upper and lower surfaces of the foliage. Give the plants a mulching of 2 inches or 3 inches of well-decayed manure or spent Hoops. Next May give them a good deluging with plain water, and a few days afterwards with some good liquid manure.

PROPAGATING THE PERNETIANA ROSES (*Northants*).—The Pernetiana Roses are best budded upon the seedling Briar stock, and upon the hedge Briar for standards. The distinguishing feature of this new tribe is that they possess much of the Briar-like nature of their first parent, Soleil d'Or. This, as you may know, was obtained from a cross between the Austrian Briar (*Rosa lutea*) Persian Yellow and a Hybrid Perpetual Rose, Antoine Ducher. The originator of the tribe, M. Pernet-Ducher, has used this Soleil d'Or and seedlings from it in creating the Pernetiana group, the seed-parents being in most cases various Hybrid Teas. For instance, Rayon d'Or was raised by crossing Melanc Soupert with Soleil d'Or. Those of the tribe that favour the Soleil d'Or most in their erect habit are Juliet, Soleil d'Angers and Beauté de Lyon, while the following have more of the Hybrid Tea character, although distinctly blended with the Briar nature: Lyon Rose, Arthur R. Goodwin, Rayon d'Or and Viscountess Eufield. All of these are very fine, and well worth adding to any collection.

DESCRIPTION OF RAMBLER ROSES (*P. H. T.*).—It is always most difficult to put on paper a true description of any Rose, and especially with ramblers, whose peculiarity it is to change in appearance almost daily. Now, in comparing the following Roses with Dorothy Perkins it must be admitted that soil and situation will make a great difference in colour, size of bloom and truss. Taking the Roses in the order you have named, Minnehaha is quite a deep rose pink in colour, the flowers much larger than Dorothy Perkins, and the truss much larger and longer. The growth is very vigorous, the foliage larger and of a paler green, and the time of flowering about the same. Debutante flowers quite two weeks earlier with us. Its blossoms are a very dainty bluish pink, double and well shaped, but the clusters are rather small. It has the merit of flowering again as does Dorothy Perkins. Lady Gay is a heavier pink, almost a salmon pink; the flowers are much larger, and the clusters are also larger. There is not so much bluntness as in Dorothy Perkins when fully out, but it does not flower much a second time. It is about eight days earlier than Dorothy Perkins. The Farquhar is of a rose pink colour something like Minnehaha, but the flowers are smaller, and the clusters will often contain blooms nearly white. It is a variety we can well do without. Dorothy Deaconson, Christiana Carle and Lady Godiva are practically all alike. If you have neither, you should obtain Lady Godiva. It is a very lovely soft flesh pink colour, and flowers about the same time as Dorothy Perkins.

THE GREENHOUSE.

AURICULA (*J. B.*).—There is no fungus present on the Auricula, nor can we find any insect. Have the plants been kept too moist and warm?

HIPPEASTRUMS (*E. R. P.*).—The most probable cause of your Hippeastrums failing to flower was that the bulb was insufficiently ripened, for had the flower-spike in embryo been contained within the bulb, it should have developed under the conditions named by you. Doubtless the same cause applies to the second and smaller bulb. In order to ensure a display of bloom, it is most essential that the bulbs are well ripened; hence they should, during the latter half of the summer, be fully exposed to the sun. They must, however, be kept regularly watered till the leaves die down, when less must be given, and throughout the winter discontinued altogether. If you have no greenhouse, a sunny window is a good place in which to ripen the bulbs.

CARNATIONS (*C. A.*).—There is no distinct Latin name for the two sections of Carnations named by you, as all of the different forms of Carnations now in cultivation have originated from one species, namely, *Dianthus caryophyllus*, a native of Europe. The Malmaison Carnation is of a sturdy habit of growth, with very large, irregularly-formed flowers, which are deliciously fragrant. It is the most particular in its cultural requirements of all the Carnations. The American varieties, on the other hand, are characterised by a free habit of growth, and bear throughout the greater part of the year fine showy flowers on long stalks. Though large, the blooms of these are in size not equal to those of the Malmaison, but they are of better shape, while in most of them the edges of the petals are more or less toothed. The varieties of this section vary a good deal with regard to their fragrance, some having very little, while others are sweetly scented.

GLOXINIAS (*Mary Jane*).—The reason of your Gloxinias behaving in the way indicated is, no doubt, owing to the fact that they have been subjected to too much heat and moisture, and are consequently unable to stand up against the change in temperature. You speak of growing them in a hothouse and then shifting them into a house which is also heated. This would I suggest that the house in which they are grown must be kept very hot indeed, for Gloxinias

at this season require but little fire-heat; in fact, good plants can be grown at this season without any artificial heat whatever, provided care is taken to shut up the house early and thus husband the sun's rays. We should advise you to grow your plants altogether under harder conditions (not altogether without fire-heat), and then you are not likely to be troubled in the way described. One thing, however, to bear in mind is, whether grown hot or cool, they must be shaded from the sun's rays during the hottest portion of the day throughout the summer months. As your plants are so weak, you may remedy matters somewhat by supporting the blooms with slender, inconspicuous sticks, tied with dull green thread.

FRUIT GARDEN.

APPLE TREES ATTACKED (*R. J. G. R.*).—The Apple twigs have been attacked by woolly aphis, and probably by canker. The trees are, there is little doubt, attacked in the stem, and the early spots should be cut out and the wounds painted with Stockholm tar or lead paint.

VINE LEAVES INFESTED WITH THRIP (*H. G.*).—The leaves are badly infested with thrip. It is difficult to kill without at the same time injuring the Vine foliage. The only way is to fumigate with Tobacco paper or rag, or with XL Alf; or, if you have time and patience, sponge the leaves of the Vines with warm water and soft soap. If you fumigate, you will require to do so on three successive evenings before you can get rid of the pest. Be careful not to fumigate with too strong doses of XL Alf.

BLACKBERRIES (*T. E. W.*).—If you do not grow the Loganberry, you should do so. It is the strongest grower and the heaviest cropper of all the Bramble type. It is a cross between the Raspberry and the Blackberry. The flavour is not over-sweet, even when quite ripe, but it is grand for tarts and jellies. Another new Bramble berry you should try is the Newberry, also the Phenomenal and the Hailshamberry. The best pure Blackberry is Rubus laciniatus, or Parsley-leaved as it is commonly called. This is a good grower, crops heavily, and the fruit is large and of good flavour. The bushes should be planted 10 feet apart.

GRAPES AFFECTED BY MILDEW (*Borough*).—The sample of Grapes sent is badly affected by mildew. It is a pity, as the Vines are evidently well grown and the bunches good in size and berry. There is nothing better than to dredge the affected parts over thickly with flowers of sulphur, leaving it on for twenty-four hours, and then syringing off with clear rain-water. Once Grapes are attacked by mildew, the marks cannot be eradicated; but the above treatment will kill the mildew. No one knows for certain the causes predisposing Vines to this disease; but we believe that injudicious ventilation in cold weather is one fertile cause. Be sparing of front air when cold winds prevail.

ABOUT PEARS (*Ilex*).—No: the pollen was not lost, but it is quite possible that the lack of fruit is due to want of pollen, for Doyenné du Comice is better for pollen from another variety altogether. In the case of this tree, it might be well to place near it a branch of another variety at flowering-time, so as to get the pollen carried on to it. Yes; prune your gridiron-shaped tree in the way suggested. "Pinching out" means pinch off by means of the finger and thumb. The small Pear is attacked by the Pear scab. Spray with copper sulphate during winter (1lb. to twenty-five gallons of water) and with half-strength Bordeaux mixture as soon as the petals fall, and again in June. The other Pear is affected with the same disease.

PEACH SHOOT DISEASED (*H. F. C.*).—The shoot is badly infested with black fly in all stages of growth. If you shake the branch over a piece of white paper, you will easily see the insects crawling about. The way to kill them is to steep the branches in the following emulsion of soft soap. Until these pests are got rid of, it is impossible for the foliage to grow. Take a claretglassful of soft soap and the same of paraffin. Mix in a quart of warm water. This will form a creamy emulsion. Add another quart of water, and the emulsion will be ready for use. Apple Mannington's Pearmain is a good Christmas dessert variety and a fairly constant bearer. Perhaps the trees want root-pruning.

KITCHEN GARDEN.

TOMATOES (*G. H. P.*).—There is no fungus disease present in the Tomatoes. They have not had a sufficient supply of potash. Give a little sulphate of potash in the water used for watering at intervals of a week.

TOMATO PLANTS NOT FRUITING (*Miss Hall*).—The Tomato is a sun-loving plant. It cannot be satisfactorily grown in a shady position, and we think that the chief reason for your plants not bearing as they ought is due to the shade of the fine foliage. The best thing you can do another year is to cut the plants down to the second leaf above the last cluster of fruit, and then top-dress the plants with the following compost: To a bushel of new, sweet loam add half a gallon of well-decayed farmyard manure, after passing it through a 1-inch-mesh sieve, and one pint of bone-dust, mixing them well together. Take away some of the old surface-soil and replace with the new compost, pressing it down hard. Having done this, remove the plants to a warm, sunny and sheltered corner of your garden out of doors. Here you will find they will soon make new, sturdy, fruitful growth and set their fruit easily, provided the plants are well looked after in the way of watering, &c. Confine the new growth to one shoot (one stem) and pinch off laterals. The plants may not ripen all the fruit before cold weather sets in, but they can then be taken under glass to finish the process.

MISCELLANEOUS.

SULPHATE OF IRON (*J. W.*).—We believe there is no material value in this article excepting that it enriches the colour of Roses, and also, as a corresponded suggested in our columns, it may strengthen the scent. Artificial manure may be safely kept for some months if it is in a rainproof shed. It need not be kept airtight.

INJURY TO HORSE CHESTNUT LEAVES (*Mrs. G. C.*).—We regret that we are unable to say what is the cause of the Horse Chestnut leaves being damaged so badly, unless they are in the way of fumes from a chimney, but perhaps you will send us more specimens when the injury first makes itself evident next year.

PRESSING COLOURED LEAVES (*H. W.*).—Some plants with highly-coloured foliage cannot be dried very well to retain their colour, and the same refers to flowers. Quick drying is most likely to prove successful. Porous paper should be used, and it should be changed frequently, taking care to dry it thoroughly after being in use. There is no other practical way of drying plants, and the loss of colour cannot be helped, though for many years people have looked for a way to avoid it.

INSECTS FOR IDENTIFICATION (*T. F.*).—The insects are aphides, and apparently the common dolfio or black fly of the Peach and Cherry. They had been attacked by a fungus, which preys upon them and destroys them; this accounts for their peculiar fluffy appearance. They will, if all are like these, not need destruction, for they are already naturally destroyed, but if not, the Peach, if under glass, requires to be fumigated. If in the open it should be sprayed with a nicotine preparation.

AQUARIUM (*U. S. L.*).—We know of no "ornamental shrub that would be always green" and likely to succeed in your conservatory pond. There are Water Lilies, Grasses, Bushes and other forms of vegetable-life which would be quite happy if partly or wholly submerged; but few of these would be evergreen, and none capable of creeping round the walls. Cement is hard, impervious and unsympathetic to plant growth, hence any draping of the sides of the tank or pond should be done from the surface margin of the same. Viewing your enquiry in detail, we doubt our ability to assist you as it stands, and think possibly you might prefer to give us some fuller particulars. Among these, the minimum temperature of the conservatory would be of some importance.

FAIRY RINGS ON LAWN (*H. C. D.*).—It is very little use trying to kill the fungus which forms fairy rings with sulphate of iron on the dry slopes you mention, for to do any good it is necessary to soak the ground to a depth of 9 inches or 12 inches with the sulphate of iron solution, and from what we surmise that is not possible. A good plan to adopt is to remove the soil from the centres of the diseased areas to 6 inches beyond the outer margins and to a depth of 12 inches, and fill up the trenches with fresh soil from some other position. The soil removed may be used on cultivated land, but not on grass land. Whether the banks should be removed bodily is a point we are not in a position to decide, for that depends solely on the character of the surrounding ground. The fungus will not spread from the inner parts of the circles, therefore there is no necessity to remove soil from those parts.

VARIOUS QUERIES (*Ignoramus*).—Your plants of *Primula malacoides* would appear to have devoted more of their energies to the production of foliage than of flowers. As, however, they continue to bloom throughout the autumn, winter and spring, it is more than possible that this defect will be naturally remedied and the plants give perfect satisfaction later on. After the Saxifrage has flowered, it should be left alone on the rockery, and not lifted and then taken under glass. The side shoots, when sufficiently advanced, may be taken off and potted into small pots, and in this way the Saxifrages in question can be increased. After potting, these offsets are best protected in a frame. If a particularly good offset develops, it may be allowed to remain to in time take the place of the present plant. Your better plan will be to replot the Lilium named as soon as the flowering stems die down, and keep them during the winter in a cold frame. Till growth recommences they will need just enough water to keep the soil slightly moist, but no more. Some Lilies are far more prone than others to remain dormant the first season after planting. Those least affected by removal are the species which produce a large quantity of roots at the base of the flower-stem, such as *Lilium croceum*, *L. davuricum*, *L. auratum*, *L. speciosum* and *L. longiflorum*. These roots serve to support the flower-stem while the roots at the base of the bulb are becoming established. Some species, on the other hand, have stout, deep-descending basal roots and very few stem ones. These need at least a season to become established before they flower well. To this class belong *Lilium Martagon*, *szovitzianum*, *chalecedonium* and others. Even those that as a rule flower well the first season after transplanting often remain more or less dormant if they are moved late in the season. The *heavilleas* can be readily grown in deep pots, and are then very useful when in flower for the decoration of the greenhouse. Pot them late in the autumn when dormant. We cannot understand your plants of *Erigeron aurantiacus* going off in the winter in the way described by you. Perhaps the drought last autumn was too severe; but, even then, that would not hold good the preceding year. We have, however, noted that this *Erigeron* often does better where partially shaded than in full sun. We should advise you to again leave *E. aurantiacus* outside during the winter, and if in a dry, well-drained spot, *E. mucronatus* as well. The mauve *Erigeron* mentioned by you is doubtless *E. speciosus*.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

NOTES OF THE WEEK.

Chrysanthemums in London Parks.—For some years past the London County Council has provided rich displays of Chrysanthemums in a number of the parks that come under its control, and, judging by the crowds of visitors, these are very highly appreciated. Exhibits are now open at the following parks: Battersea, Victoria, Southwark, Finsbury, Brockwell and Waterlow.

Tropical Fruits at Covent Garden.—During the past few weeks considerable interest has been taken in some consignments of fruits of *Monstera deliciosa*. These somewhat resemble Pine cones in shape, and the flavour may best be described as a mixture of Pineapple and Peach. The fruits under notice come from Madeira. The plant is a tropical climber, the large leaves of which are perforated with holes and the margins much lacerated. Specimens can be seen in No. 1 House at Kew, near the main entrance.

An Autumn-flowering Snowdrop.—*Galanthus Olgae* is once more on the market, and was shown at a meeting of the Royal Horticultural Society a short time ago. It is not so reliable as *G. cilicicus*, which is rather later, and has been lost several times by some experienced cultivators of the Snowdrop. It is rather a delicate grower, and has small, slender growth. The flowers are much the same as those of the common *G. nivalis*, but it blooms in October. It was found originally on Mount Taygetus in Greece.

The Rose Garden of Europe.—It is interesting to note that one of the chief industries of Bulgaria is the cultivation of the Rose for the purpose of manufacturing attar of Roses. The vast area of fertile land lying between mountain ranges in the neighbourhood of Kasanlik is devoted entirely to the Queen of Flowers, and is very appropriately known as "The Valley of Roses." It is the Damask Rose (*Rosa damascena*) that is so extensively grown for the distilleries, both pink and white varieties. A prettier sight than Rose-picking in the early hours of a June morning it would be hard to describe, and this within a few hours' journey to the north-west of Adrianople, now the scene of war with all its terrible associations. From its vast plains and valleys of Roses this Balkan kingdom has earned for itself the title of "The Rose Garden of Europe."

The Persimmon, or Date Plum.—It does not appear to be widely known that the interesting shrubs *Diospyros*, which produce fruits known as Persimmons and Date Plums, are really hardy—at all events in Southern gardens of this country. Three species are mentioned in the "Kew Hand List of Hardy Trees and Shrubs," viz., *D. Kaki* of Japan; *D. Lotus*, said to be naturalised in Southern Europe; and *D. virginiana*, the Persimmon of the United States. By way of proving its hardi-

ness, one of these species is now producing a crop of fruits on a wall facing south at Kew. It is curious to note that in their native habitats some species of *Diospyros* yield the valuable wood ebony. The sap-wood is white and soft, and the heart-wood hard and black.

Veronica subsessilis.—In the entire range of the hardy herbaceous Veronicas there is no species of such merit as this, none so rich or decided in colouring, and, happily, none more amenable to good cultivation. That is to say so unique a subject is worthy of every care, and if given generous treatment will repay it a hundredfold in August and September. This fine Japanese species is quite unique, not only in the intensity of its rich deep violet flowers, but in a flowering and vigour of growth which separates it from all others. It is a plant to be made much of.

A Good Rock Garden Shrub.—The value of low-growing shrubs in the rock garden is now fully appreciated by those who wish to have such a garden bright over as long a period as possible. Unfortunately, the number of shrubs suitable for the purpose is not large; hence *Cotoneaster humifusa*, a new Chinese species, is likely to prove a most welcome addition. It has a low, trailing habit, is perfectly hardy, and just now freely bedecked with scarlet berries. Planted so that its shoots could hang closely suspended over a large boulder or miniature precipice, it would make a fine effect in the rock garden at this season.

Exhibits from School Gardens.—Although there are thousands of school gardens in the country, it is seldom that exhibits of the produce grown therein by the scholars are seen at our London shows. At the meeting of the Royal Horticultural Society held last week, visitors were able to gain some insight to the crops grown in such gardens by an exhibit from the Purfleet School, Essex. Compared with the high-class fruits usually staged at these meetings, those comprising the exhibit under notice were, naturally, somewhat commonplace; but the exhibit served to show that instruction at the school is carried out on proper lines. More exhibits of this kind would tend to increase public interest in school gardening.

Iris Snow Queen.—This very beautiful Iris is gaining ground more slowly than its merits deserve, and intending purchasers of new plants for another year should not omit it from their lists. It is understood to be a hybrid, and to have some of the "blood" of *Iris sibirica* in its veins. It is an easy subject to grow, but evidently likes a fair amount of moisture, and by the side of a pond or stream looks remarkably ornamental. It is neater in its growth than the white varieties of the Siberian Iris itself, and has larger flowers of much greater substance, the white being so pure, also, as to well entitle the plant to the name of Snow Queen.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Zauschneria californica.—The note in your issue for October 19, page 525, reminds me that one hears constant grumbles that this plant will only flower in very exceptionally hot seasons, and that it is not generally known that the variety *californica* not only has a much longer flowering period, but produces bloom freely even in such a dull season as this last. It has paler and brighter green foliage than the type, and the flowers are of rather a lighter shade of scarlet. I have grown it here on the rock garden for some fifteen years, and though left in the same position all the time, it has never failed to make a good show each season from July till severe frosts cut it down.—E. A. BOWLES, *Waltham Cross*.

New Zealand Shrubs.—For the information of your correspondent *Mona Mackay*, page 539, October 26 issue, I may say that the crimson-flowered *Manuka*, *Leptospermum scoparium nicholii*, is a seedling variation from the common *Manuka*, a troublesome weed, not only of New Zealand, but also of many parts of Australia. There is an older red-flowered form known as *Chapmannii*, which was first found in the South Island of New Zealand, but the variety *Nicholii* is much deeper in colour, being, in fact, a rich ruby crimson, while the foliage is much darker tinted than in the common kind. The original plant of the variety *Nicholii* was, half-a-dozen years or so ago, discovered growing on the sandhills a little north of Christchurch, and was taken in hand by Messrs. Nairn and Sons of Christchurch. Since then it has been fairly well distributed, and has been grown in this country for the last three or four years.—H. P.

The Twelve Best Climbing Roses.—I had no desire to administer "a dressing" to "G. B. W.," but as "a dressing" is admittedly (whatever form it may take, pleasant or unpleasant) nourishment of some sort—for Roses—may I express the hope that the dressing, if it was one, may also prove of service to "G. B. W.," non-rosarian though he may prefer to call himself. He will forgive me if I say that in so doing I think he is libellous; at any rate, he is sportsman enough to have within him the makings of a first-class rosarian. And though he may at the moment remain "of the same opinion still," I am sure when he has obtained and grown the Roses I mentioned he will be "convinced against his will," and will then admit—I do not ask or expect him to do so before—that my twelve are better than his. I have written for *Marie Bret* and hope to flower it next season, and must conclude with a word of thanks to "G. B. W." for his courtesy and the friendly tone of his note in reply to what he terms my somewhat caustic remarks, and with the further confession that, at any rate with reference to the Latin quotation, I must cry "Peccavi."—HERBERT E. MOLYNEUX.

Cyclamen neapolitanum.—I have just been proving how well it pays to give this plant (like hosts of other things) good cultivation. For many years it has been growing here on a rough bank in very poor soil. During the last few seasons we have annually lifted a number of the seedlings and panned or potted them up, mainly for purposes of stock. The compost used has been loam, mortar rubbish, decayed Cocoanut fibre and a

little cow-manure, and in this they have thriven splendidly. I have noticed that they have given good and plenteous flowers in these pots and pans, which, by the way, are always kept outside or in cold frames, and we have just been turning out the contents of pans planted two and three years for purposes of replanting. We find large, healthy corms, each with a mass of strong fibrous roots, and, in addition, a number of stout little seedlings much more vigorous-looking than those we collect on the aforesaid bank.—F. HERBERT CHAPMAN, *Rye*.

Autumn Bedding Effects.—Many beautiful combinations of colour come under review from time to time in *THE GARDEN*, from which amateur and professional alike derive much benefit. A combination that has much to commend it on the score of simplicity and effectiveness consists of a groundwork of *Pelargonium Souv. de Chas. Turner*, with pillar-trained plants of *Swainsona alba* at intervals of 3 feet or 4 feet between, and, if the bed is a large one, a broad belt of *Veronica Andersonii variegata* enhances the effect. The *Swainsona* is a bedding plant of sterling merit, and flowers profusely from planting-out-time in May right up to the advent of frost.—THOMAS SMITH, *Coombe Court, Kingston Hill*.

Reinette Apples.—Your correspondent "A. T. C.," page 510, October 12 issue, raises an interesting point *re* the name *Reinette*. The use of names such as *Reinette*, *Pippin* and *Calville* has in this country been so carelessly treated that they fail to convey any special significance. In France and Germany, however, greater exactitude has been used, and they are applied with some system. The *Reinette* class has formed a division of most of the natural systems of classification, due to German experts, and in France the term is confined to a distinct and similar type of fruit. The character of the flesh is the basis of this group, and it may be said that all Apples that go leathery when kept too long or gathered too early are *Reinettes*. If we take the *Blenheim Orange* as a type, this particular characteristic will be realised. It is much to be regretted that these words, which should be descriptive of a class, should have been so recklessly applied, as they form a rough basis for grouping together varieties of similar qualities. The etymology of the word has been the subject of many suggestions. Its first recorded appearance is in the "*Seminarium et plantarium fructiferam*" of Charles Estienne, published in 1540. Various derivations have been put forward, including *ranette*—a diminutive from *rana*, a frog—on account of its spots, and that of Hogg quoted by your correspondent. The *Oxford Dictionary*, however, decides in favour of a derivation from *reine*—*reINETTE*, a little queen, as in our own Apple the *Queening*. I am aware that Hogg would derive this last from *coin* or *quoin*, a corner or angle, but I do not know of any philologist having accepted this suggestion, and the *Winter Queening*, one of the oldest of sorts bearing this name, is not by any means conspicuously angular.—E. A. BUNYARD.

Campanula Zoysii.—A note on this plant, together with a fine illustration which appeared some little time since, inspires me to a few more remarks on this very beautiful species, which this year I have for the first time made intimate acquaintance with in its own home. There is no wonder that *C. Zoysii* should prove so surprisingly (for it looks so frail and miffy) easy and robust under almost any reasonable conditions of culture with us, whether in soil or moraine, for, though

by nature a plant of high calcareous crevices, it is so vigorous a species that it will seed down into river shingles and there grow into enormous masses with a readiness that would certainly not be shown by *C. Raineri* and *C. morettiana*. For, like these two species, the one from the high Bergamasque limestones, and the other from the Dolomitic (I know of no high alpine *Campanula* that is non-calcareous—*C. excisa* and *C. Elatines* are from lower elevations and conditions), *C. Zoysii* belongs to limestone crevices high up in the cliff faces of the Carnic and Karawanken ranges, but locally as abundant as *C. morettiana*. It should presumably be in flower by August, and yet, in both high stations and I w, it was still in bud on August 25 of this year, with only a rare blossom open here and there. So what it means to do about seeding this season I cannot think. Nothing could well be more exquisite than its bulging and puckered up little bells of delicate pale blue. There is also an albino of extreme rarity and beauty. When it grows in cliffs, it affects the cracked rock in which *C. Raineri* can be found, rather than the stark and flawless precipices from which it is so terrible a task to extricate *C. morettiana*. But while it is even easier and heartier to grow than *C. Raineri* (being, indeed, by far the easiest of the alpine *Rock Harebells*), it is true to say that it shares *Raineri's* fascination for slugs.—REGINALD FARRER.

Lilium giganteum in Wigtonshire.—When on a recent visit to *Lochinch Castle*, the grandly-environmented residence of the Earl of Stair, Viscountess Dalrymple showed me in her famous wild garden, in a shady wood behind the Castle, an imposing specimen of *L. giganteum*, a native of the Central Himalayas, which, while reaching a height of 13 feet, had in the season of full floral beauty no fewer than sixteen enormous tunnel-shaped, ivory white flowers. I have heard of this great Lily attaining in two instances—in a garden near *New Galloway* and at *Cavens Gardens* in *Kirkbean Parish, Kirkcudbrightshire*—to an almost equally commanding elevation. I have also learned that at *St. Mary's Isle*, near *Kirkcudbright*, the former residence of the Earls of *Selkirk*, the Himalayan Lily has sometimes assumed commanding dimensions. But, so far as my personal observation is concerned, the *Lochinch Lily* beats the record, at least in Southern Scotland. Indeed, I have never heard of it anywhere in Great Britain attaining in an equally shady situation to a greater height. I may also, perhaps, be permitted to add that *L. giganteum*, whose culture is not exacting (if the soil is sufficiently fibrous to promote drainage and adequately fertile to inspire vigorous growth), is usually perpetuated by offsets, which it throws out for this special purpose contemporaneously with the decay and gradual extinction of the great flowering bulb, which is undoubtedly exhausted by this supreme effort, rather than by the mere creation of its massive flowers. Sir *Herbert Maxwell*, Lord-Lieutenant of this county, who is an earnest horticulturist and accomplished botanist, grows it extensively from seed at his beautiful residence of *Monreith*. It may be imagined how protracted is this evolutionary process when it is remembered that the largest offset obtainable takes at least four years to build up a full-sized flowering bulb. It is sufficient to render our horticultural patience, in the memorable words of *Matthew Arnold*, "too near neighbour to despair."—DAVID R. WILLIAMSON, *Manse of Kirkmaiden, Wigtonshire, N.B.*

Zephyranthes candida as an Edging.—Some weeks ago I read with interest a note in *THE GARDEN* about this beautiful little bulbous plant being used as an edging. The enclosed photograph shows it used in this way. The white flowers are very pleasing in autumn, and the green foliage makes a delightful edging. It appears to like soil that is well drained and of a rather sandy character.—E. M. D.

The Newer Hybrid Perpetual Roses.—I agree with my namesake, page 519, that the list he gives of newer varieties is a meagre one. It had better be that than a longer list of inferior sorts. I am sure Rose-lovers will have confidence in the selection he gives, because they know his recommendations are the result of practical experience. There is one sort I would like to add, and which he probably overlooked, viz., Commander Jules Gravereaux, sent out by Croibier in 1909. It may not be an exhibition Rose, perhaps, but that is not demanded of all Roses. The blooms are large, and the exhibitor would probably say they are too "rough." The petals are frilled, reminding one greatly of a Chinese Pæony. In colour it is a desirable velvety red, shaded maroon, and, what is very important, it is distinctly fragrant, which so many new Roses are not. I would like to emphasise all that is said about Gloire de Chedane Guinoisseau, because I consider this one of the most meritorious varieties sent out for many years. I have told scores of nurserymen to prepare a large stock of this variety, as there is certain to be a run on it. One of the dwarf plants I put in last November gave me ten handsome blooms during the months of June and July, as well as more from the second growth made later. Can Mr. Molyneux tell me where Hybrid Perpetual Roses leave off and where Hybrid Teas begin? What is the strict definition of the two, I wonder? —E. MOLYNEUX.

FORTHCOMING EVENTS.

November 5. — Royal Horticultural Society's Meeting and Special Exhibition of Orchids (two days) at Vincent Square, Westminster. Lecture on the first day by Miss Edith Saunders on "Double Flowers." Orchid Conference on the second day. Bournemouth Flower Show (two days). Chelmsford Chrysanthemum Show (two days). Southampton Chrysanthemum and Fruit Show (two days). Scottish Horticultural Association's Meeting. Birmingham Chrysanthemum Show (three days). Hayward's Heath Chrysanthemum Show (two days).

November 6. — Bath Gardeners' Debating Society's Chrysanthemum Show (two days). Dulwich Chrysanthemum Show (two days). Northampton Chrysanthemum Show (two days). Wandsworth Chrysanthemum Show (two days). Wargrave Chrysanthemum Show.

November 7.—Exeter Chrysanthemum Show (two days). Newport Chrysanthemum Show. Linnean Society's Meeting. Chrysanthemum Show at Stoke Newington (two days). Bury and West Suffolk Show (two days).

November 8.—Chrysanthemum Shows at Epsom, Nottingham (two days) and Lowestoft (two days).

November 9.—Burton Chrysanthemum Show.

THE GREENHOUSE.

NOTES ON CHRYSANTHEMUMS.

NOVEMBER WORK.

THE results of the work of twelve months, and in some cases more than that period, will now be seen in thousands of gardens in the country. The large blooms will be in evidence, whether they are intended for exhibition or for the embellishment of the conservatory. Specimen plants, bearing from nine to two dozen blooms each, are very effective and useful in the greenhouse, and for placing



ZEPHYRANTHES CANDIDA, AN AUTUMN-FLOWERING BULBOUS PLANT, USED AS AN EDGING.

in porches and corridors temporarily. Inexperienced cultivators are sometimes over-anxious about the production of large blooms, and often give the plants too many stimulants and in doses that are too strong. They rely a great deal on nitrate of soda and sulphate of ammonia, which kill many roots and check the growth of the bloom petals. Furthermore, they cripple the growth of suckers, and thus spoil the chance of procuring healthy cuttings for another year. After the blooms have three parts developed, the plants need only clear water of the same temperature as the house. Sufficient only is required to prevent the leaves flagging. So treated,

plants in greenhouse and conservatory groups will last a long time in a fresh state and retain their lower leaves. The blooms will not damp off unduly if a little shading is applied when the sun shines brightly.

Shading and Ventilation.—White, yellow, primrose and blush coloured flowers do not fade or damp off as soon as the bronzes, chestnuts, crimsons and buffs. Some light material should be placed over those that fade the soonest and last in a fresh condition only a short time. If grown in low houses, more shading is necessary when the sun shines brightly than when the plants are grouped in high structures. The ventilation of the house is a matter of great importance, as the plants must have plenty of air without being subjected to cold draughts. More air should be admitted through the top ventilators than the side ones. The latter must be kept closed except on very fine days. The top ventilators must be kept open night and day except in foggy weather, and every night the pipes should be warmed to ensure a free circulation of air.

Grouping for Effect.—When commencing to arrange a group of plants, the owner must always place the tallest plants at the back and finish with the dwarf ones in the front; but the appearance of the blooms must not be too formal. An undulating surface will look best and be the most interesting. Avoid overcrowding.

Plants to Flower at Christmas.—These are of great value because they provide the cultivator with blooms for cutting and other purposes at a season when flowers are scarce, few being obtainable except from plants that are forced. Chrysanthemums need no forcing. When the right varieties are grown, they will bloom at the required time if kept safe from frost and in a fairly dry atmosphere. In order to strengthen the flower-stems, keep the buds near the glass and only apply stimulants every third watering until the colour of the florets can be seen; then feed oftener for a time. A top-dressing of rotted manure and fibrous loam, mixed, will greatly benefit the plants.

Plants Lifted from Borders.—Before lifting the plants, the soil should be made quite firm all round them by treading. Then, with a clean, sharp spade, thrust well down, sever the roots on every side and about four inches away from the main stem. This will enable one to lift the plants with a good ball of soil and roots, for which a large pot, tub or other receptacle must be used. Make the new soil quite firm around the roots and give a thorough watering. The check given to such plants results in the loss of some of the bottom leaves, but the buds are not materially affected. At first daily syringings on fine days will do more good than the constant watering of the soil. If the foliage is maintained in a fresh condition, new roots will soon permeate the soil used; and, if ample ventilation be afforded, the buds will be sturdy and the flowers very satisfactory and useful, remaining in good condition for some time after frost has destroyed those left outside. AVON.

THE FLOWER GARDEN.

LATE FLOWERING TULIPS.

AS we all know, Mrs. Jarley of Living Works fame, whenever she came to such a figure as that of the Emperor of China, always gave us a bit of geography. "China," she used to say, "is divided into two parts; China proper and China improper. Of the first I know nothing whatever about, and the second we will not pause to discuss." So with these Tulips. They also are divided into two parts, but both are real, proper flowers; at least, we all say so when we have taken out our "florists' eyes" and put in those of ordinary mortals. There has been quite a little mania-time in Holland this year ever since the days of the "green sales" (that is, the plants as they are growing). I am glad, for it means that lovers of gardens all over Europe and America are beginning to appreciate Tulips at their proper value, and to realise what useful flowers they are to brighten up their beds and borders in early May.

The next ten days after these lines appear in print is the best time for planting; but Tulips, I find, are very accommodating in this respect, and I have had excellent results from bulbs which were not put in until mid-December. Perhaps, if it is not too much like carrying coals to Newcastle, I may remind my readers of the uses to which these late Tulips may be put other than those of filling beds or forming larger or smaller groups in borders.

First—and this is especially true of the Cottage section, with which, however, I must for this purpose couple one or two "species"—they are excellent for cutting. For this purpose they should be planted in beds in the kitchen garden, or else where the blooms are not wanted for outside decoration.



A VASE OF COTTAGE TULIPS. BULBS MAY BE PLANTED NOW.

Secondly—and this is only true of the Darwins and the Darwin-shaped yellow Cottage, such as Clio or Jaune d'Œuf—they lend themselves very well indeed for growing in pots to bloom, say, between March 15 and March 30. An ideal place in which to put these when in flower is on the floor of a winter garden or a smoking-room conservatory. Appended are three lists.

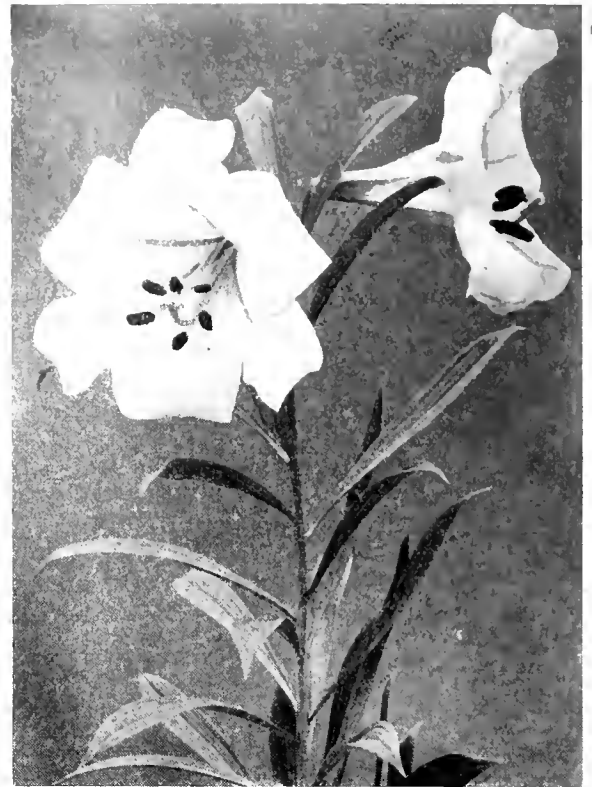
For Cutting.—These are for the most part varieties with long, slender stems and rather pointed flowers. In a word, they are graceful rather than handsome. Didieri, small pointed flower, bright red; Didieri alba, a pure white form of the preceding; elegans alba, pure white, of much substance, with a very fine "wire" edge of carmine, which never flushes the ground colour as in Picotee; Ellen Willmott, lovely soft citron yellow pointed petals; La Merveille, tall-growing, superb variety, a sort of orange carmine; Marjoletti, creamy white, with a rosy pink mark at the base of each petal; Mrs. J. Robertson, a yellow of a deeper shade than Mrs. Moon, and of much the same long shape; Mrs. W. O. Wolseley, a rich dark crimson; Pride of Inglescombe, a later, deeper coloured and larger Picotee; Picotee, pointed flower, white, edged rose—as it ages the colour gradually extends almost all over the petals; retroflexa, an ideal Tulip for cutting, soft canary yellow self, vase-shaped; The President, an exquisite shade of buff orange—very few flowers of this shade; and Walter T. Ware, by far the deepest shade of yellow of any Tulip. It has pointed petals. The illustration of Cottage Tulips admirably illustrates the adaptability of this section for vase decoration. I do not ever remember to have seen a better one. The flowers were arranged by Mr. F. Lilley of Guernsey.

For Pots.—Most Darwins may be grown successfully in pots. I give in this list another baker's dozen of some of the best of them and the yellowy Darwin-shaped Cottage varieties, which are also well adapted for this purpose. A single word must suffice for their colour description, as what is true of a cake is true of a column in THE GARDEN—you cannot eat it up and have it. Anthony Roozen, rose, edged blush; Bleu Amiable, a purple mauve; City of Haarlem, dull red; Clio, bisent colour; Gudin, mauve; Inglescombe Yellow, emary yellow; Jaune d'Œuf, yellow brown; King Harold, deep carmine; Morales,

plum purple; Painted Lady, almost white; Professor Rauwenhoff, rosy red; Suzon, pale pink; and William Pitt, blood red.

For Garden Decoration.—This list is not my own, but it is all the better for that. I asked my head-gardener to make a list of the thirty-six varieties that he considered were the most popular among our visitors this last spring. As I am away a good deal, he takes more round than I do, and I rather fancy he hears in plainer words than I do what they really think; hence its value. I am writing in the very early morning, and I have no idea what his list contains. I feel quite anxious for after-breakfast to come so that I can go out and get it. As he gives it to me, so will my readers have it, with no alteration and without any comment but this—that those varieties of which I have only a very few, such as Gertrude, Crepuscule and Royal Visit, are almost necessarily unnoticed by visitors who have only an hour or two to spend among the 500 or 600 kinds that I grow. In the list, again, the description will be an approach to the vanishing point. For convenience of reference I have roughly grouped them in colours.

Red and rose shades: Cassandra, rose; Emerald Gem, orange cherry; Isis, bright red; King Harold, dark crimson; Mrs. W. O. Wolseley, pointed crimson; Orange King, orange red; Pompadour, dwarf blood red; Prince of the Netherlands, deep rose; and Tara, deep ruby red. Yellows: Ellen Willmott, pointed pale lemon; Moonlight, long pale yellow; Solfatare, early, pointed pale lemon; and Walter T. Ware, deep golden yellow. Dark shades: Giant, dark reddish purple; Kingscourt, ruby violet; Velvet King, dark purple; and Zulu, darkest plum purple. Purple: The Bishop, real purple.



LILIAM BROWNII, A BEAUTIFUL SPECIES FOR THE OUTDOOR GARDEN OR GREENHOUSE.

Mauve: Melicette, lilac; and Salomon, pale rosy mauve. Brown shades: Clio, biscuit brown; Garibaldi, early, yellowy brown; Goldmine, orange and brown striped; Gondvink, tortoise-shell brown; Hammer Hales, pale copper, flushed orange red; Old Times, brown, edged buff; Quaintness, coppery orange; and Toison d'Or, deep orange and brown. Picotee: Carnation, white, edged rose. Pink shades: Clara Butt, pink, flushed salmon; The Fawn, palest fawn; and Suzon, warm flesh pink. Art shades: Le Rêve, pinky lavender; Beauty of Bath, pale lemon and palest mauve; and John Ruskin, rosy apricot. Slaty coloured: Norham Beauty.

A few remarks on the foregoing list may be of interest. Of all the 500 varieties which I grow, perhaps the most popular of all was Moonlight, and yet the Royal Horticultural Society's Tulip committee refused it an award. I can only say they cannot really know many of the flowers which they are called upon to judge, if they would pass this by.

My gardener found what I did. Quite four out of five visitors went for the "brownies." Clio and Gondvink were in big masses, and there was a good deal of Toison d'Or, but Quaintness in the list rather surprised me. Garibaldi was an outstanding tall early, and deserves wide recognition. Goldmine I like exceedingly, and I am glad to find others appreciate it. I have a large bed for next spring, for I have put all my little bits of it together and bought some more. No "broken" Tulip appeals to me quite like Goldmine. There is such a rich, good look about it, like a good bit of material.

Salomon is the most lovely of all rosy mauves or heliotropes. It is a Dutch breeder, very scarce, for I never meet with it, and not a very quick increaser. It has taken me a long time to work up enough stock to fill one of my 13-yards-long beds, but I have done it at last.

The superb Louis XIV. was next to Kingscourt. I do not at all agree with my visitors' choice, and I know one good friend, a Victoria Medallist of Honour with a double-barrelled name,

who will not either. I have just written a book on Tulips, and he wrote to implore me whatever I did not to leave out Louis XIV. As if I could! I have just looked up what I said, "a Tulip of exceptional magnificence." Kingscourt is, however, a very good flower.

Although I love the very dark shades, I know many do not, and I hardly expected to find Giant, Zulu and Velvet Gem put down. I suppose Giant impressed people by its height and size. We measured nearly every Tulip this year, and this and Viola were the only ones that touched 3 feet. The shade of Emerald Gem is unusual. I have come to like it very much. Most people "put it down." Now Baylor Hartland has gone it will have a sentimental interest added. He found it out and gave it to us, as he did a number of other good Tulips and Daffodils, and I wish that he still lived to give us more.

JOSEPH JACOB.

LILIUM BROWNII.

This beautiful Lily is worthy of more general cultivation, both for greenhouse decoration and outdoors, as, generally speaking, it is not a difficult Lily to cultivate. Naturally, it is best suited in a good medium loam, but, as in the case of the bulk of Liliums, it pays to prepare a special compost for them. This should consist of a rich light loam, with the addition of a little peat, plenty of leaf-soil and sharp silver sand. The proportions of the above will, of course, vary according to the class of loam one has to deal with.

In common with most Liliums, the best position outdoors for this handsome species is in a bed of dwarf-growing shrubs. Here the young growths are sheltered from cold, cutting winds during the spring. Another important point which is often overlooked is the fact that the roots of the shrubs help to keep the soil sweet and in good mechanical condition.

gives this Lily a very striking appearance. This brown colouring is, of course, much deeper outdoors than on plants cultivated under glass. There are several fine varieties of this Lily, such as Colchesteri, Chloraster and leucanthum, but at present they all seem scarce in cultivation. J. C.

JAPANESE ANEMONES IN THE WOODLAND.

For making an effective display in the open parts of the woodland during the early autumn months, few plants are better than the Japanese Windflower, *Anemone japonica*. Delighting as it does in a moderately rich, deeply-dug soil, where its long, thick roots can feed freely, it is essential that these conditions be afforded it. Grouped in front of coniferous or other dark-foliaged trees, as shown in the accompanying illustration, the beauty of the flowers is revealed to the fullest extent, and this is a point that should be fully borne in mind



AN EFFECTIVE GROUPING OF JAPANESE ANEMONES. NOTE THE DARK BACKGROUND OF TREES. NOW IS THE TIME TO PLANT!

The cultivation of this Lily in pots for greenhouse decoration presents no more difficulty than that of the more commonly grown *L. longiflorum*. As soon as received the bulbs should be potted up, putting three or four, according to size, into a 6-inch pot, or they may be potted singly into 4½-inch pots, using a light loam with the addition of a little peat, leaf-soil and sand. A little charcoal added will help to keep the whole sweet. After potting they should be stood in a cold frame until they have made plenty of roots, when they may be introduced to a warm greenhouse. They should not at any time be subjected to high temperatures, as they are best when allowed to come on gradually.

This Liliium generally grows from 2 feet to 4 feet high, and as a rule bears two or three flowers on a stem, which, when well grown, are as much as 9 inches in length. The inside of the flower is white, the outside a rich brownish purple, which

when planting this exquisite Windflower. Although it can be planted in early spring, many good growers prefer to plant it now, so that the roots get to some extent established before severe frosts are experienced. There are a number of varieties, but for woodland planting the type is admirably adapted.

SEASONABLE NOTES ON CARNATIONS.

Protecting from Sparrows.—The Carnation is beyond dispute one of the most useful of all the plants which can be persuaded to thrive satisfactorily in the restricted patches which are popularly dignified with the name of town gardens. The plants do not resent the lack of fresh air to any appreciable degree, and the fact that the soil is often extremely poor troubles them not at all. One would not dare to affirm that the blooms are quite as handsome in form, large in size, or

pure in colour as those produced by plants in country places; but they are really excellent and bring an infinite amount of pleasure to their owners. The plants are so accommodating that there is only one very real trouble, and even that does not occur in all gardens or in all districts. I refer to the partiality of sparrows for the leafage. In many gardens nothing short of a complete network of strong thread, repaired as necessary to maintain it in perfect condition, will keep a single sound leaf on a plant; while in other gardens, where the perky visitors appear to be equally as numerous, not a single plant will be touched. I do not pretend to know why this is so, but I strongly urge growers, on the first signs of attack, to net over and round each plant so efficiently that it is impossible for

that must be allocated to the task. It is essential that the cutting shall be extremely shallow, and, needless to say, roots must not be in any way disturbed or the growths injured.

Plants in pots in frames demand rational treatment. Carnations are hardy plants, except with some few tender varieties and in places where the soil and surroundings are peculiarly unfavourable. The trouble is, however, to persuade many amateurs to treat them as such. Because they are to be wintered in frames, they at once commence to keep the light close, neglect to admit fresh air, and the plants become weak owing to the unnatural manner in which they are being treated. Have nothing to do with any system like that. Never close the lights entirely, and whenever the external

Earl of Gosford (S. McGredy and Son, 1912).—To a certain extent the foregoing remarks apply equally to this Rose. Its colour alone will commend itself to exhibitors. It is a good dark crimson, very fragrant and an excellent grower; but the flowers are not more than medium size. It has done very well with me, and I have not seen a bad flower of it all the season.

Edward Mawley (S. McGredy and Son, 1912).—Be the reason what it may, this Rose has not been so fine with me as I should have liked, and I have not had such good flowers as one would reasonably expect from a Rose of its reputation. Whether the weather was too hot for it in the early season, or whether I failed to give the Rose the treatment it wished for, I cannot say, but I could not get the desired point or the size that I had the previous year. As seen at Portadown, all this was altered, and there was no difficulty in cutting and finding many fine flowers; but apparently it must be cut young and not allowed to develop too far. Its wonderful colour makes it an essential Rose to the exhibitor, but it requires the best of culture.

Elizabeth (B. R. Cant and Sons, 1911).—A pink Druschki is quite a fair description of this Rose. It is so free-flowering that it must be heavily disbudded to one bud. It has been very good with me—quite up to exhibition standard, and is catalogued at 1s. 6d. this year by the raisers, so should be tried if not already grown.

Evelyn Dautesey (S. McGredy and Son, 1911).—This is another good Rose from Portadown of the old Grand Duc de Luxembourg style of colour and strain, with the advantage that it is much finer in shape and holds up its flowers erect, which the old variety failed to do. Its



A BED OF ROSE LADY ASHTOWN, A BEAUTIFUL PINK VARIETY FOR MASSING. (See page 555.)

the birds to reach it as this is the only means of ensuring success.

Winter Treatment.—It cannot be urged against border Carnations, whether they are wintered in beds or borders, or in small pots in cold frames, that they make serious demands upon the time and skill of the cultivator; but there are necessarily certain things which will demand attention, and their neglect will have to be paid for in the form of inferior flowers the next season. In the case of outdoor plants—and this system of wintering is to be preferred where the soil is on the light side and the garden does not lie in a valley—it is imperative that their position in the ground shall be keenly watched, as frost is decidedly apt to lift them up, and to leave them thus is to court the disaster which will inevitably follow. Immediately such a state of affairs is seen to prevail, press the plant back into its correct place and make the soil as firm as, or rather firmer than, it was before. The trouble may, of course, recur, and therefore the look-out must be incessant. In no circumstances must weeds be permitted to grow in the beds or borders, and hoeing is the easiest method of keeping them in proper subjection. It is improbable that they will grow to any material degree, but hoeing will keep the surface open and thus encourage the unrestricted admission of fresh air, and should therefore be done regularly when the condition of the soil will admit of it, as the reward for the latter advantage alone is ample for the time

conditions will permit of it, admit all possible a.r. Torrential rains and snows must be excluded, and frost must not be permitted to freeze the soil to the point of breaking the pots; but except for these things, which have to be guarded against, Carnations must be kept as strong and hardy as possible through the winter to prevent worry and often great disappointment in the following spring and summer. F. R.

THE ROSE GARDEN.

NOTES ON NEWER ROSES. HYBRID TEAS.

(Continued from page 540).

Duchess of Westminster (Alex. Dickson and Sons, 1911).—This is one of those Roses that perform very much better than they promise. Judging from the buds, one hardly expects they will produce a perfect flower; but they do, and the resultant feeling of satisfaction is possibly all the greater. The colour is distinct clear rose madder pink. The blooms are of fair size, of good shape, unlike any other Rose in the shape of its petal, but none the less pleasing on that account. It is also sweetly scented, a good grower, and has good lasting powers when cut. Its only fault is that the flowers are not of the largest size compared with other Hybrid Teas, but some of us prefer beauty to weight.

colour is salmon, with the contrast of a deep carmine rose. It is very free-flowering and is naturally a garden Rose, but, disbudded, its fine shape will entitle it to a place among exhibition Roses.

Ethel Malcolm (S. McGredy and Son, 1910).—The more I see of this Rose the better I like it. It is flesh colour, with a blush centre, a description, perhaps, that hardly does it credit; but I consider it the best Rose of its colour. Fine foliage and a good grower, without being too vigorous; scented, so that it is difficult to find fault with it. Very early and very freely exhibited at the early shows. It is a Rose that always comes a good shape, with a beautiful guard petal and fine point, and generally of that useful kind which is so much wanted. It is bound to take a high place in Mr. Mawley's Analysis.

Ferniehurst (Alex. Dickson and Sons, 1911).—Not an easy Rose to describe as far as its colour goes—coppery pink on fawn the raisers call it. There is a suggestion of those sunset colours—the colours that have no name—about the flower that render it very charming. It is globular and imbricated in shape, with plenty of petals, and its growth leaves nothing to be desired. I had a glorious flower of it that I remember took Mr. Mawley's fancy very much. It has been consistently good with me, but as it requires time to perfect its flowers, they must be protected from rain.

George Dickson (Alex. Dickson and Sons, 1912).—"The Rose of the year" as far as exhibition Roses are concerned. No Rose has obtained so many silver medals as the best Hybrid Tea at so early a stage in its existence as George Dickson has to its credit. It was awarded the gold medal at the Ulverston Show in 1911. I remember at the "National" in July, 1912, my opinion was asked as to the respective merits of two Roses for the medal for the best Hybrid Tea in the show, and they were both George Dickson! I do not think it is any exaggeration to say that during the show season it secured a silver medal every week. It won a silver-gilt medal at Saltaire as the best Rose in the show, and followed it up by taking the Hybrid Tea medal at Belfast. Messrs. Alex. Dickson and Sons have sent out the finest exhibition Roses that we have, and they have no hesitation in describing it as the best exhibition Rose they have ever raised. I saw it growing at Newtownards, and the flowers were simply perfect. It is undoubtedly the best dark Hybrid Tea. The battle of the reds has waged long and furious. General Jacqueminot (1853), Charles Lefebvre (1861), Horace Vernet (1866), Duke of Edinburgh (1868), A. K. Williams (1877), Victor Hugo (1884), Ben Cant (1902), Hugh Dickson (1904), J. B. Clark (1905), Edward Mawley (1911), Leslie Holland (1911) and George Dickson (1912) each in its turn has been the "King of Roses"; but I think they and their respective champions (for each of the above Roses some exhibitor could be found who would be prepared to give his favourite variety his vote—I am backing George Dickson) will have to admit that a new king has arisen, and their favourite is deposed from the throne he has occupied. I am glad that at last a Rose has been found worthy to bear the name of "George Dickson"
Southampton. H. E. MOLYNEUX
 (To be continued.)

ROSE MME. JULES BOUCHE.

EXHIBITORS will find this to be a splendid acquisition. It has the grand high-centred form of Pharisæer, and even higher than that fine variety, but is also a much fuller Rose, and of a delicate ivory white colouring. It reminds one much of the old Souvenir d'Elise Vardon in its refined bloom. Although classed as a Hybrid Tea, there is much of the Tea nature in its growth; but it is quite erect in habit, so that it may also prove a most useful addition to garden Roses. Its fragrance is also very lovely.
 DANECROFT.

ROSE LADY ASHTOWN.

IN Lady Ashtown we have one of the best of Hybrid Teas for bedding purposes. It is good in all weathers, and as it opens well either in a cold wet summer or in a hot, dry one, it is obviously well adapted to the British climate. Moreover, its flowering season is extended over a long period, and even at the time of writing (October 24) it is making a brave show with its bright pink blooms in a Surrey garden. Unfortunately it is rather addicted to mildew, but it is such a good Rose in every other respect that we may well overlook this failing.

ROCK AND WATER GARDEN.

ROCK GARDENS IN THE MAKING.

(Continued from page 541.)

The Inexpensive Rockery.—The idea that a rock garden must of necessity be of a costly or elaborate nature may at once be dismissed as erroneous, since it is within the reach of all. It may, indeed, be either of a few yards in extent or a few acres, according to circumstances. It may be of towering character or only a foot or 2 feet raised above the ordinary level, or like that at Kew, which in part is below the ordinary level of the surrounding soil. Or it may be nothing more than a raised rockery border, that modified phase of the subject satisfying to many, and out of which much pleasure is often forthcoming. Be it large or small, dignified or unpretentious, one great principle must be kept in view from the start, viz., that to a number of alpine plants perfect drainage is of the highest importance. Hence in the case of the unpretentious structure or the rockery border a slight excavation of the ordinary soil might prove desirable, so that clinker, rubble, stone or the like may take its place, and thus ensure the more complete drainage one has in mind. To what extent this will be necessary will depend very much upon the nature of the subsoil, soils of a clay-like tenacity requiring to be moved to a few inches deep, while those of a light, sandy nature

hence the presence to-day of the rockery in small as well as in large gardens. Naturally, therefore, the selection of a suitable site in the case of the former borders on the grotesque, and suburban dwellers have to make the best of the circumstances over which they preside. Even to these a few hints, mostly of a negative kind, may not be out of place. For example, in not a few small gardens the ubiquitous Privet is almost sure to be found, and if its owner has not the heart—or shall I say the presence of mind?—to make a bonfire of it on Guy Fawkes Night, let him at least give it a wide berth in the matter under consideration. Then, again, corners should be avoided and the near presence of buildings or walls, unless the erection can be carried sufficiently high to obliterate to some extent such things, which is neither impossible nor impracticable.

In the larger garden this phase of the subject should receive more thought, and a rock garden in view in near proximity to the house where regularity of outline or formality prevail would be quite out of place. The immediate vicinity of trees is ever to be avoided, as much by reason of their root-spread as by the dangers arising from excessive drought, either from the presence of root-fibres or their overtopping branches. The continuous drip from trees, too, is highly dangerous—often fatal—to alpine vegetation, and the fact cannot be too loudly proclaimed. In this connection the operator would do well to keep in



A VIEW IN THE ROCK AND WATER GARDEN AT DRYNHAM, OATLANDS CHASE. (See page 56.)

may, in conjunction with brick rubble or old mortar, constitute a perfect rooting medium for the plants.

Suitable and Unsuitable Sites.—In the last issue some of the objects for the existence of a rock garden were considered in conjunction with that modified type which I designated "the unpretentious" to show that a rock garden need not of necessity be constructed on any elaborate plan. Coming nearer to the point at issue, one feels the need for keeping abreast of the times and for catering for that ever-increasing class who delight in cultivating the flowers of alpine regions;

mind the famous Friar Park example, for of the many object-lessons of which it is the demonstrator, this keeping of tree-life at a safe distance is assuredly one of the greatest. It will be noticed that the entire erection is open and exposed, admitting the fullest sunlight and air, in agreement with that greatest of all teachers—Nature—which it has endeavoured thus modestly to copy and imitate. It is this same principle, however, that I would like to impress upon all readers, since there is nothing of greater import at the outset.

For the rest, our rock garden may go almost anywhere we please, and seeing that so few gardens possess the natural advantages of rocky or undulating banks or surfaces, the majority are the result of adaptation to circumstances. In the matter of a site, that having a nearly or quite flat surface is among the most unsuitable, seeing that its natural advantages are nil, and that everything depends upon the skill, foresight and intelligence of the builder. Still, an interesting rock garden is not an impossible thing even amid such surroundings, as witness that at Kew, first carved out of a portion of an existing lawn. In this instance the rock garden in large degree exists in a depression of the ground, in which, however, much naturalness has been created from time to time. Then in the splendid example just completed at the Royal Horticultural Society's garden at Wisley we have the evidence the advantages a Nature-designed position affords, and which, in conjunction with a bold and successful treatment, will render it presently among the best of those available near London. These, then, are

Bays and prominences should likewise play their part, providing a greater variety of aspect on a minimum area of ground, the bolder rocks forming them meanwhile constituting sheltering glades at their bases, while affording a congenial home at their summit for trailing plants or the greatest of sun-loving subjects. E. H. JENKINS.

(To be continued.)

AN INTERESTING ROCK GARDEN.

THERE is a special feature of interest associated with the rock garden shown in the illustration on page 555, since it was originally constructed at the Royal International Horticultural Exhibition held at Chelsea in the spring of this year. It was there exhibited by Mr. Wood of Boston Spa, and the rock garden, as then shown, formed the subject of an illustration in our issue for June 8 (page 203). This well-arranged and compact rock garden was purchased by Mr. Arnold Weiss, who is evidently a good judge of a suitable home for alpine plants. This same rock garden now stands in the owner's garden at Drynham, Oatlands Chase, near



SPIRÆA DISCOLOR, A BEAUTIFUL SHRUBBY SPECIES THAT MAY BE PLANTED NOW.

varying types of the work, and are worth seeing and consulting by those having the construction of a rock garden in mind.

The Question of Form or Outline.—The first essential here is naturalness, and Nature, with all the object-lessons she reveals, must be kept in mind throughout. For example, on a mountain slope or hill there is no such thing as a straight line, and formality is non-existent. Nature has been its sculptor and fashioner for centuries; hence naturally, also, our imitation of such work will be as crude as it is feeble and incomplete. But even so we can at least mark and inwardly digest the principles which such work embodies, and in our imitations get as near the original as possible. In Nature, of course, we see more than one type; but it is the graceful outlines of our own hillsides, with their now rugged prominences or outcropping rocks, that possess the greater teaching value for the rock garden builder. Ruggedness and naturalness we may—must—have, and boldness, too, where circumstances permit

Weybridge, where it is well situated on the banks of a beautiful water garden.

TREES AND SHRUBS.

THE MYRTLE.

IT would seem to most people that there is little or nothing to be said about such a well-known plant as the Myrtle (*Myrtus communis*) more than has already been said. This is probably true, but well-known and interesting facts in connection with plants, as well as with other matters, are apt to be forgotten in the whirligig of time, especially when the object around which the interest centres is absent from thought or sight for some time.

Years ago the Myrtle used to be very much cherished in other counties than the West as a pot plant for the inside of a living-room window, not only for the beauty of its white star-like flowers, but also for the perfume emitted from them; but

in Devonshire there is no need to grow the plant indoors, for it flourishes so well in the open as to constitute it a common garden plant, either in bush or tree form, or for covering the front of many a cottage from the ground to the eaves of the thatched roofs, and more often than not with a thick woody stem, indicating that the plant is of some considerable age, the wood being very close-grained and extremely hard, but on account of its small size is used only for turnery purposes.

In any form the Myrtle is an object of beauty, the silvery white star-like flowers being set in a background of glossy green leaves; but it is a plant that would seem scarcely appropriate for a close-growing dwarf hedge, suitable to be clipped by the use of shears. Yet in a front villa garden at Exmouth a few days back I saw the plant so treated, and though the hedge was quite trim and neat, having apparently been recently cut, the flowers were peeping out all over it, giving to the whole a very attractive appearance, besides which the scent from the flowers must at times be very pronounced. It may be worth noting here that the flowers had at one time a commercial value for the production of an otto produced by distillation and used as a perfume.

The Myrtle may well be classed as an economic plant, for every part of it has at some time been put to some useful purpose. Thus, in India, where the plant forms a shrub indigenous in the area from the Mediterranean region to Afghanistan and Baluchistan, the bark and leaves are used for tanning, while an oil is obtained from the berries which is said to promote or strengthen the growth of the hair. Besides all these uses, the several parts of the plant are credited with medicinal properties; as, for instance, the leaves are used in India in epileptic cases, as well as in dyspepsia and diseases of the stomach and liver. Carminative properties are attributed to the fruits, which are administered in cases of diarrhoea and dysentery.

Though the common name, Myrtle, is well known in this part of the world as referring to *Myrtus communis*, in Australia it is applied to a large number of trees and shrubs belonging not only to the Natural Order Myrtaceæ, but to various other Orders. The most important, however, is that of *Fagus Cunninghamii*, a very large tree allied to our common Beech, but producing a beautifully-figured, dark reddish wood, much valued for furniture. J. R. J.

SPIRÆA DISCOLOR.

THIS is a useful shrubby Meadow-sweet grown in some gardens as *S. arifolia*, a name derived from the fact that the leaves resemble those of the White Beam. A native of North-Western America, it is an old garden shrub, though by no means a common one. Mature bushes are from 6 feet to 12 feet high, which at the end of June and during July produce a profusion of the many-flowered terminal panicles of creamy white blossoms. As may be readily observed by the illustration given on this page, *S. discolor* forms a large, graceful bush. No hard-and-fast rule of pruning is required, all that is necessary being to thin out the growths when becoming too thick by removing the old worn-out wood. Soil is not an important matter with this *Spiræa*, though good loam and an occasional dressing of manure are helpful. Propagation is effected by seeds and cuttings. The latter, made of the young, ripened wood about a foot long, may be inserted outside at the present time, or cuttings of half-ripened wood can be inserted under glass during August. A. O.

GARDENING FOR BEGINNERS.

PLANTING BULBS IN GRASS.

IN springtime bulbs are welcome whether grown in pots, borders, or grass plots. They are extremely beautiful in any position, and add very considerably to the attractiveness of the garden. If bulbs are planted under the turf where the soil is very poor, the growth will not be of great strength, and if the inexperienced cultivator unduly enriches such soil by adding rotted or other manures in bulk, the grass will grow very grossly in patches, and this will mar the general appearance of that part of the garden where the bulbs are planted. A soil of moderate richness does not need any manures added to it. Poor soils do, and the manure should be put in as follows: When the holes for the bulbs have been made, the soil immediately below the point where the bulbs will be placed must also be taken out and some well-rotted manure put in, not in large quantities, so that the growing bulbs will benefit and not the grass. Replace some of the soil and thoroughly mix it with the manure. If a small quantity of road scrapings, old potting soil, or any similar material which is procurable be put on the manure mixture, it will form a fit base for the bulbs.

Good Positions for Bulbs.—Nearly all kinds of bulbs that are usually grown in garden borders are suitable for planting in grass, the Hyacinth and Tulip not answering so well. Narcissi, Jonquils, Snowdrops, Crocuses, Scillas, the Grape Hyacinth and Ixias are very suitable. Under large trees with spreading branches, near hedges, in dells, in woodlands, on the lawn (in odd corners or at the edge of it) and on banks, bulbs look charming when in full flower.

Formal and Informal Planting.—When grown in the garden borders there must be a certain amount of formality in the arrangement, but when grown in grass the formality may be avoided. Informal

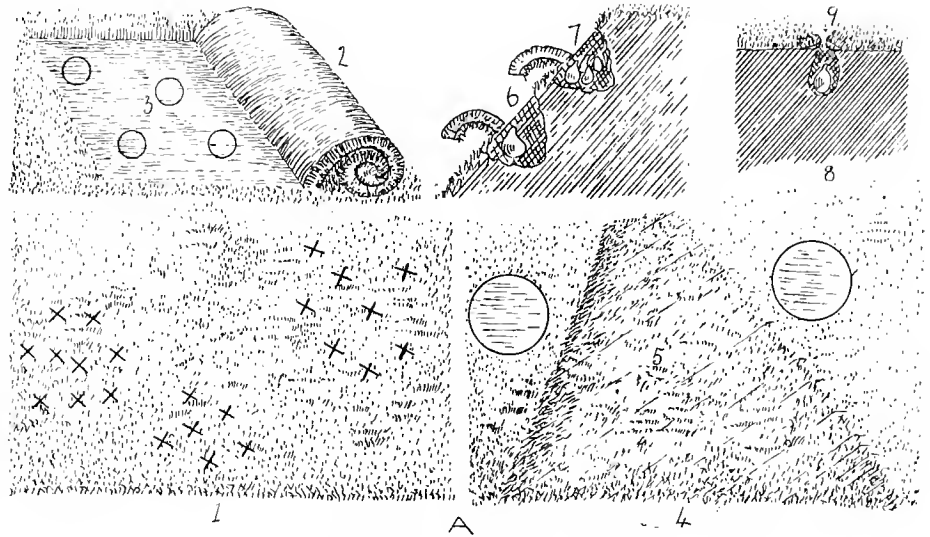
clumps are the most pleasing. My meaning will be made quite plain if readers will refer to No. 1 in Illustration A. The crosses there denote clumps of bulbs in the grass.

How to Plant Bulbs in Clumps.—No. 2 shows the turf turned back, and the circles in the soil beneath, indicated by No. 3, are the parts that must be broken up for the bulbs before the roll of turf is replaced. No. 4 shows a bank, the bulbs being planted in various positions on the bank itself, No. 5. The way in which the bulbs should be planted in clumps and singly is shown at Nos. 6 and 7, where turves are turned back for the purpose. Then there is a way of planting without

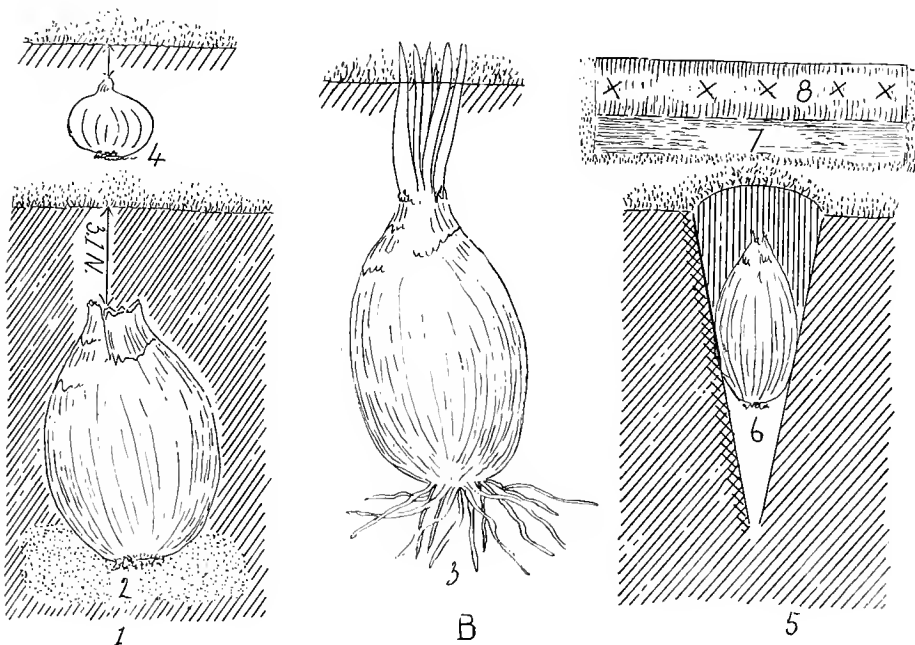
peeling off turf at all. It is shown at No. 8. The turf is simply cut crosswise and gently raised at the edges; then the soil is scooped out with the aid of a trowel, the soil is broken, the bulb planted and the turf firmly replaced.

In the Illustration B the method of planting is shown. No. 1, a Narcissus bulb planted 3 inches below the surface with sand or sandy material at its base, No. 2, to ensure a free root action. No. 3 depicts the same bulb making growth very early in the spring through the turf. No. 4 shows the comparative depth at which the smaller bulbs, *i.e.*, Crocuses and Snowdrops, should be planted. No. 5 denotes a section of soil in which a bulb, No. 6, has been wrongly planted. It is not right to simply make a wedge-shaped hole with a sharp instrument and then forcibly thrust in a bulb as indicated. Such bulbs will grow, but not very satisfactorily. No. 7 indicates the soil below the peeled-off turf. When the bulbs are planted in the soil, the roll of turf, No. 8, should be pierced in several places (as shown by the crosses) immediately above the positions; then the bulbs will grow through freely.

G. G.



METHOD OF PLANTING BULBS ON LAWNS AND GRASSY SLOPES.



RIGHT AND WRONG WAYS OF PLANTING BULBS.

CLEMATIS PANICULATA.

NATURALLY late in flowering in most seasons, the blossoms of this Clematis are spoiled by frost before reaching maturity. The best results have so far been obtained in the milder parts of the country, or when the plants are growing against a sunny south wall. Making very good growths during the summer, these usually finish well by carrying a profusion of terminal and axillary inflorescences. The hot summers of the United States are responsible for the great popularity of *C. paniculata* in that country, where it flowers annually in great profusion. The plants are very vigorous in growth, attaining a height of 20 feet to 30 feet or more. The pinnate leaves are dark green and shiny, the flowers white, 1 inch to 1½ inches across, with a sweet but not very strong fragrance. It is a native of China and Japan.

A. O.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Tulips.—To have satisfactory results, these bulbs should be planted without delay in a fairly rich, porous soil occupying an open, sunny position. When planting, bury the bulbs as near as possible the same depth; this will ensure their blooming all at the same time. Select varieties that are specially recommended for bedding purposes by the merchants, and plant one variety at a time so as to prevent any confusion of the sorts.

Planting Roses.—If the site is not ready for immediate planting when the plants arrive, they should be laid out of doors in a shallow trench with the roots well protected with soil, and, should the roots be dry, immerse them first in water and soak them before heeling in. Before planting, cut off any damaged roots or coarse ones devoid of fibre, using a sharp knife and always cutting from the under side towards one. Plant as near as possible to the same depth as before, always allowing for the plant to settle a little, and make firm by treading. Unsuitable soils may be improved by adding good turfy loam, cut from an old pasture, and farmyard manure at the time of digging or trenching.

The Rock Garden.

Pernettyas.—Where space permits of the inclusion of berried shrubs, none is more beautiful at the present time than *Pernettyas*, and their evergreen foliage is attractive at all times. A shady and fairly moist position suits them, with a peaty soil or one containing plenty of humus.

Cotoneaster humifusa.—Though fairly new to cultivation, this shrub has become very popular for the rock garden, and is now very pretty and doubly interesting with its scarlet berries. The plant is absolutely hardy, and quite unlike any of the others in commerce. For clothing a rock or pocket its evergreen, creeping foliage would be hard to beat.

The American Cranberry (*Oxycoccus macrocarpus*) is now quite an interesting lowly shrub with its crop of reddish fruits, which are large considering the size of the foliage. Choose a fairly damp soil and add a little peat.

The Hardy Fruit Garden.

Pruning.—Where a considerable quantity of fruit trees have to be pruned, I advise an early start with some of the trees that have shed their leaves. The work of pruning and nailing on a north wall is not very envious in cold weather. Morello Cherries are usually first in the list, and with these it is necessary to lay in plenty of young wood to ensure a heavy crop of fruit. The later trees of Sweet Cherries also may be planted in the same aspect. If due attention was paid to the pinching of the breast-wood, little pruning will be needed. Lay in securely the growths that were left for extension, remove any dead growths or weakly shoots, but do as little pruning as possible, which is conducive to gumming and canker.

Plants Under Glass.

Palms.—At this season especially the pots are well filled with roots, and, in addition to manurial stimulants, a little soot-water will be valuable and materially help in keeping the foliage a good colour. The plants will not need shade any longer, and on warm, bright days keep them well syringed. Scale is one of the worst pests, and must be got rid of by sponging with an insecticide and carefully removing with a brush. Handle the plants so as not to injure the leaves, remembering that these should prove a source of attraction over a long period. Syringe afterwards with clean, tepid water.

Achimenes.—While the growth is dormant keep the pots or baskets of soil containing the corns in a warm place, and withhold water until re-planting again. If placed under a stage, lay the pots on their sides.

Caladiums.—To preserve these successfully during the winter months, the pots containing the tubers must be rested in a warm house, and, like the foregoing, when the foliage has ripened, be kept thoroughly dry.

Cyclamen.—These will now be past throwing up their flowers, and the plants will still benefit by occasional waterings with an approved fertiliser. We find Peruvian Guano, in addition to others, a valuable plant stimulant. Great care should be exercised in watering now, and avoid pouring the water on to the crown of the plant. Look the plants over occasionally and pull out any leaves that are decaying. Seedlings that were sown at a good distance apart in the pan will not need disturbing too soon, but any that are becoming crowded should be transferred to a pan or box or potted into small receptacles.

The Lawns.

Leaves.—Continue to sweep these up and cart away as often as possible. Though this seems labour in vain, it is highly beneficial to the grass, these frequent brushings distributing worm-casts. If allowed to remain, the leaves soon commence to rot, and are then very difficult to remove.

Pampas Grass.—This is extremely ornamental, and probably at this season one can locate the place where a clump or two would be a valuable improvement to the surroundings. The plants like a good soil, and are best planted or divided in the spring, when a fair-sized hole should be taken out and some better material added.

Fruits Under Glass.

Early Vines.—The earliest-forced Vines will now be ready for pruning and cleansing preparatory to being forced for another season's crop. The borders should have the surface soil and rubbish scraped off and taken away. How much may be removed depends upon the number of roots on the surface, which must be carefully preserved. Top-dress with some chopped loam to which has been added some lime-rubble, wood-ash and manure. Old turves laid downwards on a sprinkling of bone-dust and artificial manure make an excellent rooting medium. Give an abundance of ventilation whenever possible.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Planting.—Press to a conclusion the planting of border plants, bulbs for spring flowering, Wall-flowers, *Myosotis* and other plants for a similar purpose.

Roses.—Of these, home grown and propagated plants should be first transplanted, nursery plants not always being matured as yet, and having the foliage intact. In some instances it is good policy to lift and replant established Roses after thoroughly cultivating the soil and adding to it such manure as may seem fit. Scotch, Boursault, Gallica, Austrian Briar and other Roses that bloom early may be pruned now, or, rather, thinned of old and weakly growths.

Cultivating Flower-beds.—This is a suitable time to thoroughly cultivate the soil in beds and borders that have been occupied by summer-flowering plants. The soil is all the better if turned up annually to a depth of 18 inches, and a moderate amount of perfectly-rotted manure worked in. All flower-beds get out of shape, and the opportunity may now be taken to restore them to their original lines. It may be noted that beds to be occupied by *Begonias*, *Pentstemons*, *Antirrhinums* and other soil-exhausting plants may have a thin layer of manure spread over the surface. Soot is also helpful and, with the manure, becomes well mixed with the soil by springtime.

Storing Roots.—Great losses are frequently experienced with *Dahlias*, *Lobelia cardinalis* and others. *Dahlias* require a mild temperature of 45° to 50° to preserve the tubers, rot being almost certain to destroy them if too cold. They must be kept dry. *Lobelia*, on the other hand, so long as frost is not severe, may be frozen without harm. I keep them in boxes covered with leaf-soil in cold frames, and seldom lose any. *Begonias* are wintered in the Apple-room, laid out on the floor under the shelves. *Salvia patens* keeps best if buried deep enough to be out of reach of frost.

Shrubs.

Trimming.—Deciduous climbers, such as *Polygonum baldschuanicum*, now that they are denuded of foliage, should be roughly trimmed, and will be neater and less unsightly during the winter than if left to mature.

Protecting.—In the colder localities shrubs asking for protection during winter may now be seen to. Small plants are efficiently protected by means of very rough and loosely-made straw ropes wound around them. Very large ones may have straw or Bracken packed about the stems, and standard Roses and others should have Wheat or Rye straw placed lengthwise round the stems and tied top and bottom, and the straw near the top thickened to take in the heads. Spruce branches are usually employed to protect wall shrubs. They do not keep out frost; much as protect the plants from frost and thaw and the too rapid change brought about by the sun after hard frost.

Pruning.—In extensive shrubberies there is always a certain amount of dead wood to be expected annually, and previous to the general cleaning up before winter, an opportunity to cut it out may be taken. As little as possible of the dead material should be left. Dead portions, however small, have a distinctly injurious effect on ligneous vegetation, apart altogether from its unsightliness.

The Plant-Houses.

Roman Hyacinths.—These will now force successfully, the secret of success being to keep them darkened till the spikes are well advanced, after which a few days' exposure brings colour into the leaves and spikes. Too much heat is injurious.

Lily of the Valley.—Current year's growths may now be used. A strong bottom-heat with much moisture and darkness is essential, and only the best crowns should be used. A check is almost sure to prove fatal.

Perpetual Carnations.—Cuttings inserted three weeks ago will now be rooted, and should either be potted into 2½-inch pots if in boxes, or, if struck in 2½-inch pots, these should be removed to a cooler structure for a few days before re-potting.

Asters.—Climax is a delightful plant for the conservatory. Single growths rooted in spring, planted out, and lifted not long ago and potted, are of much value for greenhouse decoration and cut flowers now and later. Jessie Croom is also useful, and other late sorts may be treated in the same way, but Climax is certainly superior to any.

The Rock Garden.

Rearrangements.—Since last writing, part of the rockery here has been completely overhauled and rearranged, a nasty stoloniferous weed having got among the plants necessitating the operation. *Rose Hiawatha*, the newer *Deutzias*, *Astilbes* and other plants have been introduced, as well as *Iris*es, *Brodiaeas* and autumn-flowering *Crocuses*. Nowadays one must look to effect in all things, even in an assemblage of stones!

Cleaning.—Now that the foliage is off the trees, the rockery should be thoroughly cleaned of sticks, leaves and weeds, and any plant needing protection seen to. Some nice fresh compost neatly scattered over bare surfaces adds to the general appearance and gives it a cared-for aspect. Where slugs are troublesome, dustings of soot are of value, and they are also effective manurially to spring bulbs. *Colchicums* and autumnal *Crocuses*, which are all making roots.

Hardy Fruit.

Gathering.—The weather must be closely watched, so that the latest Apples and Pears are not caught by a severe frost. Generally the week we are entering on is quite late enough to let them hang. If the fruit cannot be gathered perfectly dry, see that it is dry before storing.

Planting.—Young trees from Southern nurseries are, as a rule, ready to plant about this time. From Northern nurseries it is better to delay two or three weeks before having them sent on. The chief point to observe in planting is the trimming of the roots, especially the broken and extra strong ones, planting just deep enough and giving efficient support to the trees till established. Early planting conduces to immediate root-production, and wind loosens and damages the new roots if the trees are unsupported. R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Scolopendrium vulgare crispum nobile (Bolton's Broad Form).—This is the somewhat cumbrous title of much the largest variety of Hart's-tongue Fern we have seen—large indeed even unto coarseness. Some of the biggest fronds measured 2 feet in length by 6 inches in width, the former taken from the soil to their tips; hence it is a giant in its tribe, and one in all probability whose present huge proportions do not represent full development. The coarsely cristate or fimbriate margins of the fronds present a plumose character generally, are of dark green colour, and are rendered the more attractive by reason of the almost ebony-coloured stem. The variety was first found as a wilding on Walton Crag, Lancashire. Exhibited by Mr. W. B. Cranfield, Enfield.

AWARDS OF MERIT.

Nephrolepis Millsii.—A distinct and rather neat-habited plant, the brownish-looking fronds of an acuminate character, and not unlike in form and colouring those of some of the *Polystichum aculeatum*s, though more erect. It increases freely by stolons and division, after the manner of its tribe. From Mr. W. A. Manda, St. Albans.

Chrysanthemum Mrs. John Maher.—A decorative Japanese variety of the purest whiteness, which is said to be a splendid keeper. Its purity alone will command for it a place, while its graceful and decorative character will assuredly please all. From Mr. T. Page, Hampton-on-Thames.

Chrysanthemum Mrs. Loo Thomson.—The shortest description of this excellent variety should also prove the most graphic, viz., that it is a sport from the beautiful single-flowered variety *Mensa*, sent out about three years ago. The colour is pale or canary yellow.

Chrysanthemum Charles Kingsley.—A single-flowered variety of a rich, almost intense golden yellow colour. It is one of those which impel admiration at a glance, at once of high decorative value and much excellence. These were exhibited by Mr. Norman Davis, Framfield.

Chrysanthemum Honourable Mrs. John Ward. A very large and handsome-looking yellow-flowered variety of the exhibition order, the long, drooping florets affording great depth to the flower-head as a whole. Exhibited by Mr. Charles Beckett, Chilton Gardens, Hungerford.

Chrysanthemum Boh Pulling.—A monster exhibition variety of good contour and form, and of intense golden yellow colour. The florets are of the drooping order, giving the flower-head great depth and importance, its value being enhanced by the exceptional richness of its colouring. Shown by Messrs. H. J. Jones, Limited, Lewisham, S.E.

Chrysanthemum J. W. Streeter.—A soft-coloured or canary yellow sport from the well-known and highly-popular Japanese incurved variety *H. W. Thorpe*, and, like the original, of excellent form and outline. We regard it as indispensable, albeit the rather formal character of these incurved varieties does not appeal to all. From Messrs. Cragg, Harrison and Cragg, Heston, Middlesex.

Chrysanthemum Miss M. Borrer.—An attractive single-flowered variety whose florets are coloured a deep rosy lilac. The colour is warm-looking, and should prove effective under artificial light. The naturally-grown sprays demonstrated

freedom and utility. Exhibited by Mr. L. F. Harrison, Orchards, East Grinstead. The stock is in the hands of Messrs. Whitelegg and Page, Chislehurst.

NEW ORCHIDS.

There were no fewer than ten new Orchids to gain awards; of them four received first-class certificates, and the remaining six awards of merit.

First-class certificates were awarded to *Cattleya labiata* Opal, a handsome white variety with a tint of pink and gold on the lip; *Brasso-Cattleya dighiano-Mossia* The Dell variety, a remarkably well-formed white variety raised by crossing *Brassavola digbyana* and *Cattleya Mossia* Wageri, both of the foregoing novelties being shown by Baron Bruno Schröder; *Cypripedium Pallas-Athene*, a flower of perfect shape, with dark purple spotting, shown by W. R. Lee, Esq., Heywood; and *Cymbidium Doris*, an interesting hybrid between *C. tracyanum* and *C. insigne*, shown by Messrs. J. and A. McBean.

Awards of merit were granted to the following: *Sophræo-Lælio-Cattleya Sandhage*, from E. H. Davidson, Esq.; *S.-L.-C. Menippe* H. S. Goodson, from H. S. Goodson, Esq.; *Lælio-Cattleya de Hemptinne*, sent by Count Joseph de Hemptinne of St. Dennis, Ghent; *Cattleya Princess Mary*, a hybrid from C. dowiana, shown by Pantia Ralli, Esq.; *Cattleya Maggie Raphael* Goodson's variety, from H. S. Goodson, Esq.; and *Lælio-Cattleya Golden Oriole* Holford's variety, exhibited by Lieutenant-Colonel Sir George Holford, K.C.V.O.

The foregoing awards were made by the Royal Horticultural Society at the meeting held on October 22.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

DAFFODILS FOR BEDDING (S. C. R.).—You cannot do better than employ such as *Emperor*, *Sir Watkin*, *Barri* conspicuous, *Grande*, *Poeticus* *Almira*, *Mme. de Graaff*, *Mme. Plomp* and *Empress*, all excellent and cheap sorts for the purpose named. You might plant the varieties at their own depth asunder, or twice that distance or even more, according to circumstances.

YUCCA FILAMENTOSA (M. A. R. G.).—The young growths which push up after a plant has flowered must be divided up singly. This may be done by taking them off and inserting as cuttings when large enough; or, if growing from the ground, divide them up when well rooted. May is the best month to transplant *Yuccas*. The cuttings will root best in a heated greenhouse.

NAMES OF CHRYSANTHEMUMS (A. E. H.).—We have experienced considerable difficulty in naming the blooms sent to us, as in almost every instance the numbers attached to them had become loosened in the course of transit through the post. We therefore give you the names as far as we are able to identify the colours and form of each one. They are as follows: *White Points* (rosy purple with white points), *Mme. Casimir-Perier* (white, freely suffused pink), *Crimson Marie Massé*

(chestnut bronze), *Horace Martin* (yellow), *Robbie Burns* (cerise pink), *Mme. Marie Massé* (lilac mauve) and *Ethel Blades* (compact crimson flower).

BANANA FRUITING OUTSIDE (T. J. S., Orled).—We are very interested to hear of your success in growing a plant of *Musa* (Banana) to the fruiting stage out of doors in this country. Your garden must be favourably situated for such a plant to grow outside for five years and reach a height of 8 feet. Plants of *Musa* fruiting outside in this country are occasionally met with, but it is usually in a sheltered garden in the South or West, Cornwall or Devon, for instance. There are one or two records of plants living outside in sheltered Surrey gardens. At *Coombe Wood* the Japanese Banana (*Musa Basjoo*) survived for several years. Coming from Japan, this is the name we should suggest for your plant. The fruits of this are about four inches long.

IRIS SUSIANA (A. F.).—This weird and beautiful *Iris* is only a success when given a special course of treatment, and is in no sense to be regarded as a reliable border plant permanently in this country. Native of Asia Minor and ripening early in the season, the plant usually receives a good ripening, which in the open air in this country is very rarely imitated. In the first year following importation the plants flower with a fair degree of certainty, as do others grown specially in such places as Guernsey. To succeed with it at all, it is best to regard it as a greenhouse plant, and, having flowered it, to place the pot or pan on a shelf where it will get the full benefit of the sun for three or four months, or even longer, no water being afforded meanwhile. The plants should not, of course, be so dried off until the foliage shows signs of maturing, after which, during the resting period, the plants should be kept absolutely without water. When restarting them into growth—they will do this naturally in December or thereabouts—meagre supplies of water should be given, and more as the leaf-growth advances. Kept in the fullest light and free from insect pests, flowering is more reliable, and the plants will not require potting more than once every two years. A marly loam, or one of good fibrous character with which old mortar rubble has been freely incorporated, will, with firm potting and perfectly free drainage, be all that is necessary from this point of view. We should advise you to start afresh with the best roots you can obtain.

EXHIBITING "HARDY PERENNIALS" (J. A. M.).—Unless the terms of the schedule contain some saving clause, the inclusion of *Dahlias* in an exhibit of "hardy perennials" should have been followed by disqualification, while the *Chrysanthemums* named would have given rise to serious doubt. In your favoured district the latter might come within the wording of the schedule, though generally for exhibition work it would not pass muster. The *Dahlia*, however, is another matter altogether, and even though the tubers of some varieties are hardy enough to endure if deeply planted and protected, the majority would not be so, and the plant would certainly not be; hence its inclusion would not be tolerated by 1 per cent. of capable judges. The case to which you refer, however, is the outcome of an ambiguous wording of the schedule, and a class for "hardy perennials" without any qualifying clause might include *Roses* and other flowering shrubs—anything, indeed, that is characterised by hardiness and a perennial duration. This looseness in the compilation of schedules is a pitfall to many, and the more confusing to exhibitors when the judging is not in competent hands. The secretary, in informing you that the *Dahlia* is a "hardy perennial," was obviously in error, as the first frosts of autumn should unmistakably prove. There is so much looseness of wording existing in schedules to-day that we hope to devote an article to the subject at a later date in the hope of making the way more plain to secretaries, committees and exhibitors alike.

TREES AND SHRUBS.

HORSE CHESTNUT LEAVES (Courtoun).—There seems to be no reason to doubt that the leaves you enclose are those of the common *Horse Chestnut*; but to make quite sure a flowering shoot is necessary. The colour of the leaves is both curious and interesting. It is probably one of two things—either a sport, or a portion of the tree unhealthy from disease. If you ascertain that the coloured leaves are not due to the second reason, then it is worth propagating by grafting on young plants of the common *Horse Chestnut*. Some of our most ornamental trees have originated in the first instance from sports. It might be worth while consulting a local nurseryman with a view to propagating ten or twenty plants, and watching their behaviour for the next two or three years.

THE GREENHOUSE.

SEEDLING FUCHSIAS (G. G.).—The expanded flowers on some of the specimens sent had dropped: hence it was difficult to make out to which number they belonged. They comprise a very pretty selection of seedling varieties belonging to that race we received from Germany a few years ago. Nos. 1, 3, 4 and 5 appear to us very much alike, and the best of the four should certainly be well worth propagating. There may be individual differences, but from the small sprays, with most of the expanded blooms fallen, one cannot say. No. 2 strikes us as a fine and, as far as we know, a distinct variety. It would be as well to submit them to some firm who make a speciality of this class of plants. At all events, we think, if you have a good specimen or specimens of the most distinct sorts, it would be a desirable plan to submit them to the floral committee of the Royal Horticultural Society, Vincent Square, Westminster, S.W.

DOUBLE BEGONIAS DROPPING FLOWER-BUDS (H. C.).—It is exceedingly difficult to answer your question, for though everything points to an error in culture somewhere, yet the details as given by you are such as should ensure success. The pots used are certainly rather small, and we are inclined to think that possibly the ball of earth gets too dry, an opinion strengthened by the fact that most of the blossoms drop directly they are watered. A reasonable amount of air should, of course, be given to the plants; while by the term "well shaded" we presume you do not imply that they are deprived of the very necessary light, but only protected from the sun's rays. We regret that it is impossible for us to put our finger on the cause of the trouble, but hope that our suggestions may help you to overcome it.

BEGONIA (W. T. E.).—Your Begonias are badly attacked by the Begonia mite, which seems to get more troublesome year by year. Last season the hot weather was blamed for its rapid increase, but it scarcely applies this summer, although the pest is as bad as ever. Not only are Begonias attacked by it, but many other plants. We have had, during the present year, several badly-infested specimens of Cyclamen submitted to us. The best way to get rid of the enemy is to dip the plants in a nicotine mixture, or to vaporise with the XL All Vaporiser. A single application will not, however, suffice, so it must be done three or four times at intervals of five or six days. A prominent feature of this pest is that it does such a deal of mischief before its presence is suspected; hence, though you may destroy the mite, you can never hope to restore the plants to their normal health this season.

FRUIT GARDEN.

PLANTING APPLE TREES IN ASPARAGUS-BEDS (J. D. B., Cambridge).—We do not advise you to plant Apple trees in the Asparagus-beds. They would, as you suggest, make very rank growth, and the Asparagus would also suffer.

LEAVES FOR INSPECTION (W. H. B.).—It is too late to do much now. The leaves have apparently been attacked by aphides in the early part of the year. Quassia and soft soap is the best spray to use, or a nicotine preparation, but it must be used as soon as the aphids hatch out in the spring, usually about the beginning or middle of April, if the spraying is to do its work properly. The Apple is Worcester Pearmain.

STORING WALNUTS (Hetty).—Walnuts when freshly gathered should be spread out in the sun either in an airy structure or out of doors for a few days to dry. They may then be packed in layers in jars or large flower-pots, with a little salt between each layer, and be buried in a heap of sand until required for use. Another way is to subject the Nuts to sulphur fumes for an hour or two, and then pack them in jars in the same way, afterwards burying the jars in sand. The sulphur fumes have the effect of killing any fungus germs which may be present on the shells.

LEAF-CURL IN PEACH LEAVES (J. R. K.).—It is cold weather which brings this about, this condition favouring an attack by a fungoid disease, which causes the peculiar distortions in the leaves. The best course to take in the matter is to pull off the diseased leaves and burn them. This will get rid of the green or black fly as well, which are generally found in the curled-up leaves. Other healthy leaves will follow. Messrs. G. Bunyard and Co., Limited, of The Nurseries, Maidstone, claim to have an effective preventive against its attack, provided it is applied when and as directed by them. It is called "Medela." Nothing can cure the leaves once they are affected.

TO GROW PEACH TREES IN POTS (J. C. Le S.).—The starting of these young trees by budding or grafting in the first instance, and the subsequent treatment of them, is no doubt interesting work; but it is of so highly technical a nature that an amateur without previous experience in the work would inevitably come to grief in the attempt and his labour prove abortive. It would be far better for you to purchase the young trees you may require ready grafted and ready trained. Two year old trees are to be obtained at little cost from any nurseryman advertising with us. The best time to purchase is early in November, when they may be top-dressed with soil, and the pots buried in fine coal-ashes to the depth of 4 inches above the pots in an open sheltered position. They may remain here until the time comes for them to be placed in the greenhouse, which should be the first week in February. Should frost prove severe during winter, the trees should have slight protection by having straw or bracken or mats placed round them. When taken into the greenhouse, give them the lightest and most airy position possible. The question of ventilation of the house and watering the trees is one of the most important items in the culture of these trees. There should always be a slight circulation of air round the trees, and they should never suffer from dryness at the root. On the other hand, it is equally important for them not to be too wet at the root for any length of time.

KITCHEN GARDEN.

CARROTS IN A WOODY CONDITION (H.).—Generally speaking, the cause of Carrots being in the condition you mention is poverty or shallowness of the soil or want of deep cultivation. Carrots grow best on land which has been deeply trenched and liberally manured for a crop the previous year. If you have not such a piece of land available, you should trench a piece as soon as you can (2 feet deep) or lay a good dressing of manure in the bottom trench.

MISCELLANEOUS.

MAKING A MORAINÉ GARDEN (J. B. C.).—An illustrated article on this subject appeared in our issue dated January 27, 1902.

MOLES UNDER PEAR TREE (O. H. B.).—We know of no method by which you can poison or suffocate the moles as you suggest. The only remedy seems to be to trap them by the usual iron traps. If you can find a run where they go to drink, this is the best place to set the trap, preferably in the hardest soil you can find.

VARIOUS QUESTIONS (E. J., Radlett).—Basic slag may with advantage be applied in the previous autumn to the ground destined for the Tomato. The phosphates will then be available for the crop. But why not lime the soil and then use superphosphate? The Apple marked (b) is the Siberian Crab. We regret we cannot name Apples from imperfect fruits. Typical ripe fruits should always be sent. The fruit is very badly attacked by *Fusicladium dentriticum*. Bordeaux mixture is the best thing to apply; but it is equally important to prune out all diseased shoots during winter, and to spray during winter with a solution of copper sulphate, 1oz. to twenty-five gallons of water.

BERBERIS BERRIES (J. F.).—The berries of *Berberis Darwinii* may be used in the same way as the common *Berberis* (*B. vulgaris*) for making into jelly, although they are not often used for the purpose in this country. *Berberis* berries are said to make an excellent preserve; but as the seeds are rather large, the boiled fruit requires straining and the juice boiling again before bottling. If you follow the method usually adopted for making Red Currant jelly, the preserve ought to be a success. There will probably, however, be a little more sugar required than is usual with Red Currants. In America the fruits of *Berberis Aquifolium* are used rather extensively under the name of Oregon Grapes. Certain Himalayan *Berberis* are also esteemed on account of their fruits. We have not heard of the fruits being used with whisky.

NAMES OF FRUIT.—*North Wales*.—Apple Northern Greening;—*Phœnix*.—2, Lamb Abbey Pearmain; 3, Dutch Mignonne; 4, Cellini Pippin.—*J. E. Phillips*.—1, Marie Louise d'Uccle; 2, Beurré Clairgean; 3, St. Luke; 4, Beurré Hardy; 5, Beurré Diel; 6, Beurré Dumont.—*Devonia*.—Margil.—*H. M.*—1, Stubbard; 2, Reinette Grise; 3, Wellington; 4, Lane's Prince Albert; 5, Braddick's Nonpareil; 6, Miller's Seedling; 7, Ribston Pippin; 8, Kentish Fillbasket.—*R. S. Wallins*.—1 and 2, Newton Wonder; Pear, Black Pear of Worcester.

NAMES OF PLANTS.—*E. H. L., Newmarket*.—*Rhamnus cathartica* (Buckthorn).—*R. T., Breconshire*.—*Juniperus Sabina prostrata*, or *Prostrate Savin*.—*S. P. R., S.W.*—1, *Chrysanthemum Rubis*; 2, *Seedling Chrysanthemum*; 3, *Sedum Anacampseros*; 4, *Sedum Sieboldii*.—*B. G.*—*Chrysanthemums*: 1, *Rubis*; 2, *Goacher's Crimson*; 3, *C. indicum flore plena*, *Asters*: 4, *A. multiflorus*; 5, *A. Amellus* var. *bessarabicus*; 6, *A. Novi-Belgii deous*; 7, *A. Amellus* variety; 8, *Sedum spectabile*; 9, *Stachys lanata*; 10, *Pulmonaria officinalis*.

SOCIETIES.

NORTH OF ENGLAND HORTICULTURAL SOCIETY.

This society held its monthly exhibition in the Corn Exchange, Leeds, on October 17 and 18, when a fine display of fruit, flowers and vegetables was staged. The proceeds were given to the Leeds Workpeople's Hospital Fund. An eighty-guinea challenge cup for the best exhibit went to Mr. J. Pickersgill, Westwood, Leeds, for a group of foliage plants, consisting of well-grown and highly coloured *Crotons*, interspersed with *Ocimum* and *Cattleyas*. This group also secured the society's gold medal. Mr. W. D. Cliffe of Meanwood Towers, Leeds, took the fifteen-guinea cup for the best amateur exhibit, which comprised seventy-five dishes of magnificently grown vegetables. Mr. William E. Sands, Hillsborough, of Irish fame, had a large and interesting stand of sixty kinds of seedling Potatoes. The exhibit of Messrs. Webb of Stonbridge, containing fifty varieties of Onions, all well grown and admirably staged, came in for much attention from the visitors during the two days.

ORCHID COMMITTEE.

Messrs. Mansell and Hatcher, Rawdon, Leeds, had a most beautiful and tastefully-arranged group of Orchids. Every plant was a perfect specimen of culture, and this, combined with the arranging, left a deep impression upon those who had the pleasure of seeing it, the colours being so harmoniously blended that a fitting description can only be conveyed when describing it as a "harmony of mauves." The society's gold medal was awarded.

A silver-gilt medal was awarded to Mr. W. H. St. Quintin, Scampston Hall (gardener, Mr. F. C. Puddle), for a small group of seedling *Cattleyas*. Among them *The Bride* was awarded a first-class diploma, while *Lælio-Cattleya scampstonensis* secured a second-class diploma. J. H. Craven, Esq., The Beeches, Keighley, had many notable kinds in his collection. *Cypripedium Boltonia* secured a first-class diploma. Large silver medal.

Mr. W. Shackleton, Bradford, secured a bronze medal for a group, also a second-class diploma for *Cypripedium Charlesworthii*.

FLORAL COMMITTEE.

A group of foliage and flowering plants was exhibited by Mr. J. Pickersgill, Borden Hill, Leeds (gardener, Mr. J. Donoghue). Gold medal and challenge cup.

Mr. B. Bagshaw, Chapel Allerton, Leeds, showed *Carnations*. Bronze medal.

Messrs. William Cutbush and Sons exhibited *Michaelmas Daisies*, with *ericoides* predominating. Large bronze medal.

A large bronze medal was awarded to Messrs. Little and Ballantyne, Carlisle, for *Potatoes* and *coniferae*. Mr. T. C. Edwards, Leeds, showed a stand of hardy *Chrysanthemums*. Bronze medal.

Mr. A. C. Watson, Morley, exhibited *Begonias* of the *Gloire de Lorraine* type. Bronze medal.

For a collection of *Michaelmas Daisies*, Messrs. Harkness and Sons, Bedale, were awarded a bronze medal. This firm also received an award of a second-class diploma for a sport from *Chrysanthemum Goacher's Crimson* named Mrs. J. Fielding.

Messrs. S. Broadhead and Sons, Huddersfield, showed rockwork. Large bronze medal.

A silver medal was awarded to Messrs. Young and Co., Cheltenham, for a stand of bright and well-grown flowers. Among them were *Enchantress*, *J. Whitecomb Riley* and *Britannia*, which were very good.

Messrs. G. Gibson and Co., Bedale, were awarded a bronze medal for rockwork, also a second-class diploma for *Berberis Wilsonae*.

A large bronze medal was awarded to Messrs. William Bousall and Son, Harrogate, for an extremely fine collection of *Bouvardias* in many varieties.

For a stand of Apples, Pears and *Carnations*, Mr. William Laureuson, Yarn-on-Tees, was awarded a large bronze medal.

Mr. T. Blackburn, Huddersfield, secured a silver medal for a small group of well-grown *Carnations*. The individual flowers in this collection showed a high standard of cultivation. *Empress Day*, *Colossus* and *White Perfection* were outstanding among the many varieties staged.

Messrs. W. and J. Brown of Peterborough again had one of their attractive stands of *Roses*, the arrangement being excellent. *Mme. Victor Verdier*, *Juliet* and *Earl of Warwick* were good flowers for the time of the year. Large silver medal.

Messrs. John Hill and Sons, Stone, Staffs, were awarded a large silver medal for shrubs.

Messrs. Dickson and Robinson, Manchester, got together a very large group of *Chrysanthemums* and *Asters*, the most striking feature to be observed being the freshness and cleanliness of both flowers and foliage. We noticed such good kinds as *Mr. Cecil Davis*, *Ella*, *Ringdove*, *Albus*, *Climax* (very good), *St. Egwin* and *Thonsonii*. Large silver-gilt medal.

Messrs. Little and Ballantyne, Carlisle, were awarded a silver medal for shrubs.

A large silver medal was awarded to Messrs. William Wells, Merstham, Surrey, for *Chrysanthemums*, *John Edwards*, Cranford Yellow and *Miss M. Walker* being very good.

A silver medal was awarded to Mr. J. C. Fordy, Castleford House, Northumberland, for *Gladoli*.

A large bronze medal was awarded to Messrs. Ker and Son, Liverpool, for a stand of *Crotons* and *Cyclamen*.

A vote of thanks was given to the Lakeland Nurseries, Windermere, for an exhibit of *Begonias* and *Ferns*.

FRUIT AND VEGETABLES.

Mr. W. D. Cliffe, Meanwood Towers, Leeds (gardener, Mr. W. Haigh), was awarded a large silver medal and challenge cup for vegetables, *Onions Premier* and *Barnet Hero* being well grown. The collection of *Potatoes* was very creditable.

Mrs. Hogg, Meanwood, Leeds, had a large stand of bottled fruits, which secured a silver-gilt medal.

A silver medal was awarded to Messrs. Little and Ballantyne, Carlisle, for their interesting collection of fruit, such kinds as *Apples Peasgood's Nonsuch*, *Lord Derby*, *Maltster*, *Norfolk Beauty* and *Beauty of Stoke* being very good.

A vote of thanks was given to the Hunsingore and District Fruit-growers' Association for a collection of fruit.

For sixty varieties of *Potatoes*, Mr. William E. Sands, Hillsborough, Ireland, was awarded a large silver medal.

Mr. R. J. Foster, Stockell Park, Wetherby, Yorks (gardener, Mr. John Turton), had a small but well-grown collection of hardy fruits. *Pears Louis Bonne* of Jersey and *Durondeau*, and *Apples Rival*, *James Grieve* and *Charles Ross* were exceptionally fine. Good decoration in this exhibit showed off the produce to advantage.

Messrs. Webb, Wordsley, Stourbridge, were awarded a large silver medal for fifty varieties of *Onions*. We noticed that *Cranston's Excelsior*, *Webb's New Masterpiece*, *White Lisbon* and *Snowball* were well grown and solid.

Messrs. W. Seabrook and Sons, Chelmsford, were awarded a large silver-gilt medal for a stand of *Apples*, *Peasgood's Nonsuch*, *King of the Pippins*, *Bleuheim Orange* and *Allington Pippin* being outstanding varieties.

A second-class diploma was awarded to Mr. Yeld, York, for *Aster Celia*.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

The monthly committee meeting of this society was held at the Royal Horticultural Society's Hall on Monday, October 14, Mr. Thomas Winter in the chair. One hundred and thirty-one new members were elected, being a record number. Gardeners have still an opportunity of making the United their approved society, and should fill up their forms at once. The sick-pay amounted to £38 13s. A grant from the Benevolent Fund to enable a distressed member to pay his contributions was made, also a grant to a member from the Convalescent Fund. One member was allowed to withdraw his interest. Business relating to National Health Insurance was also dealt with, and a sub-committee formed to advise upon any current business arising from the same.

THE GARDEN.

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NOVEMBER 9, 1912.

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EDITORIAL NOTICES.

Every description of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

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NOTES OF THE WEEK.

Winter and Summer.—In a Wiltshire garden, within a short distance of each other, the Winter and Summer Jasmynes are in full flower, and a Holly tree is glowing with scarlet berries.

A Dwarf-growing Loosestrife.—One hears from various quarters good accounts of Henry's Loosestrife, *Lysimachia Henryi*, which is a novelty now finding its way into a good number of gardens. It seems to be doing well, and is very pleasing with its procumbent stems and its terminal heads of orange yellow flowers. It bloomed for a considerable time this summer, and has been admired by many competent judges.

Record Price for Apples.—At the Kent Commercial Fruit Show held at Maidstone last week, and a review of which appears on page 568, six boxes of Bramley's Seedling Apples sold by auction realised £12. As each box held about three and a-half pecks, this is, of course, more than £2 per bushel. The fruits in question were packed and shown by Mr. G. E. Champion of Mereworth, Kent, and won the Coupe Challenge Cup offered for the best six boxes in the show. Every Apple was brilliantly coloured and perfect of its kind.

Fremont's Crane's-bill.—*Geranium Fremontii*, although not long introduced to gardens, has become a favourite with those who cultivate it. It is about a foot high, and has nice leaves and large purplish flowers of a light shade. This hardy *Geranium* flowers freely and for a long time in succession, and will thrive in any border of common soil. In the large rock garden it is also effective. Like most of the race, it blooms in summer. This Crane's-bill can be raised from seeds, and is also propagated by division of the roots in spring.

City of London Rose Society.—This new society was formed at a meeting held at the Cannon Street Hotel on Wednesday of last week, its objects being to encourage healthy competition among *bona-fide* City workers who are interested in Roses. Only those who actually work in the City of London itself, or who have offices situated therein, will be eligible for membership. The annual subscription will be 5s., and it is hoped that the Lord Mayor will kindly consent to act as president. The secretary is Mr. A. E. Protheroe, 67 and 68, Cheapside, E.C., and all applications for membership should be sent to him.

Verbascum Miss Willmott.—Miss Willmott's Mullein is a handsome garden plant, and the raisers are to be congratulated on having obtained permission to give it the name of a lady so devoted to gardening. It is not unworthy of the name, being one of the finest of all hardy summer-flowering perennials with white flowers. From its rosettes of big green leaves it sends up a towering spike

some five feet or six feet high, and produces in great numbers handsome white flowers some two and a-half inches across. It is truly a stately subject, and of grand effect in the border. Unlike many of our finest Mulleins, it is a perennial, and will remain in good health for a long time.

Late Roses.—On Sunday, the 3rd inst., we gathered in an Essex garden some excellent flowers of the following Roses: Richmond, Margaret, James Coey, Margaret Molyneux, Mrs. Alfred Tate, Gloire de Dijon and the Old Blush China or Monthly Rose. On the mornings of the 1st and 2nd inst. 7° and 9° of frost had been registered, but the Roses appeared none the worse.

A Fertile Form of Adiantum farleyense.—The magnificent stove Fern, *Adiantum farleyense*, must no longer be regarded as sterile, for its variety Gloire Van Moordrecht, introduced last year, has proved itself capable of producing fertile spores. Already the large Fern-growers of this country have succeeded in raising many thousands of young plants from spores. *A. farleyense* is a native of Barbados. It was introduced to this country in 1865, and has long been regarded as a barren form of *A. tenerum*.

Hornbeam Fruiting Well.—*Carpinus Betulus*, or the common Hornbeam, is a well-known deciduous tree, native of Britain. It forms a good hedge plant and withstands pruning well, while the leaves remain on after they are dead, thus affording good shelter. The dry fruits or seeds ripen at this season, and are now being well distributed by the wind. From almost every county come reports of the enormous quantity of seed produced this year. It is probably the greatest within human memory.

A Beautiful Birch.—In 1888 the late Mr. J. H. Veitch succeeded in introducing seeds of *Betula Maximowiczii*, a Japanese species, to England, and about five years later seeds or young plants were sent to Kew by Professor Sargent, Director of the Arnold Arboretum. It does not appear to have been introduced in quantity, however, judging from its rarity. In noticing it in the "Forest Flora of Japan," Professor Sargent refers to it as "certainly one of the most distinct and beautiful of all Birches, growing 80 feet to 90 feet high with a trunk 2 feet to 3 feet in diameter, with pale, smooth, orange-coloured bark." Its behaviour in this country up to the present indicates that the above remarks are applicable to it here, for its great vigour, handsome bark and large leaves make it the most conspicuous of the several species. The broadly-ovate leaves are 3 inches to 6 inches long, without reckoning the stalk, and are 2½ inches to 3½ inches wide. About May the male catkins, which are 3 inches to 4½ inches long, are showy, while in late summer the fruiting catkins, which are up to 4 inches long, are equally conspicuous.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Best Pears and Their Cultivation.—On pages 543-44 Mr. Bunyard has some valuable notes on Pears. I was most interested in his reference to varieties, and especially to Conference, Durondeau, Marie Louise, Emile d'Heyst and Doyenné du Comice. The last-named makes a grand wall specimen trained fan-shaped. Emile d'Heyst does well on a wall and also as a bush. It is not attractive in appearance like Durondeau, but its flavour is not surpassed by many other varieties, and amateurs with small gardens should be sure that it is added to their collection. Durondeau is a grand variety for growing as a cordon, and in this form produces some of the handsomest fruits among Pears. Marie Louise is generally grown on a warm wall, but it will succeed as a pyramid or bush.—B.

A Beautiful Autumn Border.—The illustration of the border of Michaelmas Daisies at Aldenham House, Elstree, which appeared on page 543 of the issue of October 26, is one of the best of these useful autumn-flowering plants I have ever seen. For many years past I have wondered why so many persons plant their Michaelmas Daisies in unattractive ways—isolated plants in odd corners, tied up like sheaves of corn. The plants shown in the illustration referred to look so charming that no doubt many readers will be induced to rearrange their plants and purchase more this autumn. The Michaelmas Daisy flowers at a season when outdoor blossoms are becoming scarce, and on this account alone it is well worth growing. Mr. Beckett, has, I believe, raised some very beautiful varieties.—AVON.

Polyantha Rose Ena Teschendorf.—Allusion is made to Jessie as a free-flowering form of Dwarf Polyantha on page 525, issue October 19, and although granting that Jessie is exceptionally free and desirable as a dwarf Rose, it is likely to be ousted from its popularity by Ena Teschendorf, a newer variety in the same section. The newcomer was sent out in 1911 by Teschendorf, and is a sport from Mme. N. Levavasseur. The flowers are a deep carmine red colour, quite like Grüss an Teplitz. It has the advantage of not losing its colour even in the hottest sun. In colour it is deep carmine red.—E. M. [We have not seen the variety Ena Teschendorf, but the great advantage of Jessie over others of its type is that its colour does not fade in brilliant sunshine.—Ed.]

Tobacco Plants and Earwigs.—In "Notes of the Week," issue October 26, a very interesting reference is made to amateurs and others refraining from growing Dahlias on account of trouble from earwigs. I have never heard that the Tobacco Plant will keep away these pests, but pennyroyal is supposed to drive them away from cupboards, rooms and greenhouses. I have tried this remedy—which is rather expensive—and found it efficacious. The liquid should be put on pieces of cotton-wool and laid near the things that are to be protected, though not on any foliage. Perhaps a few pieces of the wool saturated with the oil and placed near the stems of the Dahlias would keep the earwigs away.—G. G.

— I noticed in your issue for October 26, page 537, a suggestion that planting Tobacco Plants among Dahlias might keep off earwigs. As a matter of fact, I do not find that I am much troubled with earwigs among the Dahlias.

This year there has been quite a plague of earwigs, but I have found very few among the Dahlias. On the other hand, three plants of *Cobæa scandens* have been utterly ruined by them, the leaves and buds being absolutely destroyed, so that I have not had a single flower. In front of one of these *Cobæas*, in touch with it, are a number of Tobacco Plants (the ordinary flowering variety). This plant has suffered the worst of all, so the Tobacco Plants do not appear to be of any use in keeping off earwigs.—(Colonel) G. H. TILLARD.

The Deciduous Cypress Fruiting.—Although the Deciduous Cypress is a well-known tree in the British Isles, its cones are known to comparatively few, for it bears them shyly in this country. Even in the Duke of Northumberland's garden at Syon



A CONE-BEARING SHOOT OF THE DECIDUOUS CYPRESS. THIS TREE SELDOM FRUITS IN ENGLAND.

House, where so many fine and rare trees are to be found and the Deciduous Cypress is remarkably well developed and represented by many specimens, cones have not been noticed before the present year. Now an example, and curiously not one of the older trees, is bearing some hundreds of cones, while a few may be noted here and there about other trees. A few cones are also noticeable on the old trees at Whitton, while they have been reported from a few other localities. *Taxodium distichum*, the Deciduous Cypress, is a native of the Southern United States, where it grows over large expanses of swampy ground. It is peculiar by reason of the curious woody knees, which are produced from roots that are in the vicinity of water. These rise to a height of 2 feet or more, and are well developed about some of the Syon House trees. The tree is also able to live and grow, year in, year out, when the trunk is surrounded by water, a character not noticeable in many trees. In America the wood is in demand for many purposes, and is of great value for the manufacture of water tanks, on account of its great lasting qualities when wet. The tree is an ornamental one, its graceful foliage being a pleasing shade of pale green in spring and summer, and turning to deep crimson-brown in autumn. The illustration was prepared from a shoot collected at Syon House.—W. D.

Lilium Brownii.—The statement on page 553 that the varieties of *Lilium Brownii* are scarce in cultivation needs in one instance to be qualified, for Colchesteri is sent here from Japan in considerable numbers during the winter season; indeed, the *Brownii* of the Japanese is this particular variety. Taken altogether, *L. Brownii* is a most puzzling Lily, all that is known of its early history being that it was distributed by a nurseryman named Brown in the first half of the last century. Since then it has been cultivated by the Dutch, and, despite the assertion so often made that *L. Brownii* is a native of China, the fact remains that the form long grown in Europe is quite distinct from any that we have had sent from China within recent years. Whether the change has resulted from an extensive period of cultivation I cannot say, for I have known the Dutch *L. Brownii* for the last forty years, and it has not varied one whit in that time. There is no doubt that the European and Chinese kinds are but forms of one Lily, but on the score of priority the specific name of *Brownii* must belong to that grown by the Dutch. A perusal of the "Kew Hand List" tends to confuse rather than elucidate the situation, as there *Colchesteri* is separated from the other forms of *L. Brownii* and is regarded as a variety of *L. japonicum*.—H. P.

Iris Snow Queen.—It would be interesting to know whether the writer of the note on *Iris Snow Queen* on the first page of the issue of THE GARDEN for November 2 has any evidence for his belief that the plant is a hybrid. I should like to put forward the view that this fine *Iris* is merely the albino form of the *Iris orientalis* of Thunberg, which is probably a good species and entirely distinct from *I. sibirica*. It is possible that the two plants merely represent different combinations of pairs of Mendelian characters, but this possibility has still to be proved. All that appears to be proved at present is that *I. sibirica* has tall stems, raising the flowers well above the foliage, and produces heads containing three, four or five flowers on pedicels of increasing length. The capsules are short, broad and bulging, and contain large, flat seeds. *I. orientalis*, on the other hand, has leaves which, if held erect, are as long as, if not longer than, the stems, of which the terminal head rarely contains more than two flowers on comparatively short pedicels. The capsules are long and narrow, triangular in section, and contain small, thick, almost cubical seeds. As regards the actual flowers, those of *I. sibirica* are distinctly smaller than those of *I. orientalis*, and, moreover, the almost orbicular fall-blades of the latter are extended nearly horizontally, while those of *I. sibirica* hang perpendicularly. Of both these *Irises* albino forms occur, among which there are individual differences both in vigour and in floriferousness. *Snow Queen*, the albino form of *I. orientalis*, breeds true to the white colour, and is a recessive for the colour factor. If the type and the albino form be cross-fertilised, some very beautiful forms of a bright sky-blue colour can be obtained, of a shade that I have not seen elsewhere among *Irises*. It is not quite certain how the name of *I. sibirica* came to be applied to a plant which seems to be confined to Central Europe and Russia west of the Urals, but the evidence of herbarium specimens seems to prove that *I. sibirica* does not extend east of this line, and that *I. orientalis* is not found west of the neighbourhood of Nertsinsk in Manchuria, whence it extends through Korea into Japan.—W. R. DYKES, *Charterhouse, Godalming.*

Cattleya Maggie Raphael.—As a winter-flowering *Cattleya* this is a great acquisition, being obtained from *C. aurea* and *C. Trianae*. It combines the good qualities of both these fine species, and in instances where *C. Trianae alba* has been employed as a parent the result is even more pleasing. In this case the sepals and petals are white, while the lip is purplish, with distinct golden yellow markings in the throat, which are inherited from *C. aurea*. Wherever *Cattleya* flowers are required, this hybrid should certainly be added to the collection.—S.

Narcissus minimus for the Rock Garden.—Judging from the exclamations of delight with which my friends greet this little Daffodil when they visit my garden, it is to a very large number of gardens not so much known as its dainty minuteness deserves. While it is common knowledge that there is a class of dwarf *Narcissus* suitable for rock gardens, few who have not actually seen it realise how dwarf this species really is. Thinking to bring this home to my friends who are not able to see the little flowers themselves, I took the accompanying photograph. Everyone knows the large yellow trumpet Daffodil Emperor; by cutting a flower of this and inserting it near a colony of the wee *Narcissus minimus*, a comparison of their real size is disclosed, which is much more telling than a long wordy account of them. Not only is *N. minimus* small, but it is perfect in every detail, closely resembling Emperor in form. No rock gardener who does not already possess them should miss the opportunity of obtaining and planting now one or two groups of these sweet little flowers, selecting any spot in the rock garden open to the sunlight for them. No special treatment appears necessary beyond working in some leaf-soil and sand about the spot they are to occupy in the already well-grained rockery.—REGINALD A. MALBY.

ROCK AND WATER GARDEN.

ROCK GARDENS IN THE MAKING.

(Continued from page 556.)

Rocks, Natural and Artificial.—The question of suitable and unsuitable rocks in the making of a rock garden is, naturally, of some importance, and much depends on a good, or, shall I say, a right selection. For present purposes, however, those named above, the "natural and artificial," merit careful attention. For the moment, too, one might dismiss the latter and concentrate attention upon the former. Natural rocks, it should be stated at the outset, are of two kinds, the suitable

The Great Oolite from the same range of hills is, on the other hand, good in colour, in the size and variability of the available blocks, in its stratified character, and sympathetic and nourishing withal. Naturally, limestones are exceedingly variable, and those of Derbyshire and Yorkshire not only differ from each other, but materially so from those of other localities. In the main, however, limestones may be cited as the most serviceable and important of all stratified natural rocks, and because of their boldness or picturesqueness are pleasing to the eye and do not, for any lengthened period at least, detract from the plants themselves; that is to say, they are quickly brought into submission, and, weathering down by exposure and climatic influences, soon lose their one defect of quarried newness, should this exist. That it may not exist is proved by the frequent presence of "weathered limestone," which, assuming a dull grey tone, is a charm indeed.

Another type of limestone is the Purbeck, found in the neighbourhood of Swanage. In its selected form it is ideally beautiful and picturesque, admirably suited to vegetable-life, available in large or small blocks, and, presently toning to a marl brown, is difficult to surpass. In point of colour—and colour is not to be ignored—this and the great oolite of the Cotswolds appeal to me before all the other limestones. Both, too, are of the greatest value when used in conjunction with water in the rock garden. Thus it will be seen that this most important of rocks is available North and South, and in many other directions also; hence rock garden builders should take note.

Sandstones.—These come next in importance to the limestones, and, like them, are of a greatly varied class—good, bad and indifferent. In Surrey and Kent, Worcester and Cheshire, Warwick and Sussex and other parts, examples of this rock occur, now of wall-like massiveness, or, anon, shaly and thin and of no value to the rock garden builder. Occasionally, however, these thin slabs of rock—probably for the sake of cheapness alone—are employed, and, upended as they most usually are, constitute a good object-lesson of what not to do in rock garden building. Slabs of this rock 3 feet



NARCISSUS MINIMUS, WITH A FLOWER OF EMPEROR FOR COMPARISON OF SIZE.

FORTHCOMING EVENTS.

November 11.—National Chrysanthemum Society's Floral Committee Meeting.

November 12.—Chrysanthemum Shows at Belfast (two days) and Plymouth (two days).

November 13.—East Anglian Horticultural Club's Meeting.

Chrysanthemum Shows at Brixton, Colchester, Lancaster, King's Lynn (two days), Buxton, Bristol (two days), Barry (two days); and of the Liverpool Horticultural Association (two days).

November 14.—Chrysanthemum Shows at Romford, Hitchin, Barnsley (two days), Sheffield (three days), Edinburgh (three days), Newport (Mon.), Bridgwater, Aberdeen, Cardiff; and of the Scottish Horticultural Association (three days).

November 15.—Chrysanthemum Shows at Macclesfield (two days), Blackburn (two days), Huddersfield (two days), Bolton (two days), Bradford (two days), Kilmarnock, Stockport (two days); and of the Leeds Paxton Society (two days).

and unsuitable, *i.e.*, the sympathetic and nourishing, or the reverse. Quite naturally, too, it is the sympathetic and nourishing which we require, and into this category fall the majority of limestones and sandstones. One uses the word "majority" studiously, inasmuch as certain classes of rock—the inferior oolite of the Cotswolds, for example—crumble quickly under the influence of frost and exposure; hence a rock garden of such material would soon be crumbling to decay, with, possibly, serious results. The magnesian limestone of the same district is also unsuitable, its glaring whiteness—approximately that of chalk—being much against its use.

or 4 feet across are sometimes seen; but, save as stepping-stones in the water garden or as pathways in the rock garden itself, there is little use for them. Most usually—almost invariably—sandstone may be regarded as of a sympathetic nature to vegetable-life, to which the built sandstone walls of Cheshire and the unquarried rocks of many parts bear ample testimony. Ferns, Mosses and other plants appear to take most kindly to it, and the fact is of untold value to the gardener. Rugged, too, or picturesque in some instances, and porous and moisture-absorbing to a degree, it is greatly to be desired for the purpose one has in mind.

For rock building, however, I should place the red sandstone first, that of the old red sandstone formation more particularly, by reason of its rich warm colour, which contrasts so effectively with plant-life. Its porosity and coolness are of value, and its more exposed parts are soon moulded by wind and storm. Some of the Sussex sandstones are good and effective, others are perhaps a little formal, and, unless intelligently handled, present that appearance in the garden. Some types of sandstone, like those of the other great formation first referred to, are quickly rent by frost; hence care is necessary in the selection of them, if not even some sort of guarantee of their durability in this respect. Apart from the rocks already mentioned as suitable, there are others known as tufa and millstone grit. Both are excellent for plant growth, and in good hands are capable of affording effective results. On the question of expense, the first-named for outdoor work may at once be dismissed. It is perhaps less good and less nourishing than some of the limestones, though of a highly decorative class.

Highly-fossilised rocks, such as those of the gryphaea and ostrea, of the oolite marl of the Cotswolds, and others which in Nature have become crystallised by contact with igneous rocks in the molten state, I regard as unsuitable for rock gardening in general.

Perhaps the least suitable of all natural rocks for the purpose in view is granite, primarily because of its impervious and unsympathetic nature.

E. H. JENKINS.

(To be continued.)

TREES & SHRUBS.

EVERGREEN RHODODENDRONS.

IN gardens large and small, where the soil is deficient in lime, Rhododendrons are the best flowering evergreens to plant. The transplanting may take place at almost any season, although autumn and spring are unquestionably the best times.

A small collection of Rhododendrons might include the following named sorts: Pink Pearl, Gomer Waterer, Mrs. E. C. Stirling, Mrs. Tom Agnew, Lady Grey Egerton, Alice, Lord Palmerston (Cynthia), Doncaster, Lady Clementina Mitford, Mrs. Holford, Snowflake and John Waterer. The named varieties are so numerous, however, at the present day that, were a request sent to ten of the leading Rhododendron-growers for a list of the twelve best sorts, fifty names at least would probably be given. In addition also to named sorts, raisers of seedling Rhododendrons in quantity have usually a stock of plants for disposal which, though not quite up to the standard to introduce as new named varieties, are too good to destroy

SHRUBS FOR TERRACES.

The practice obtains in some gardens of cultivating plants of various descriptions in tubs for use on terraces during the summer and autumn months, and as a number of enquiries have been made of late respecting plants which are suitable for the purpose, some suggestions are appended as a guide for those who wish to take up this method of plant culture.

It is, as a rule, necessary that some fairly light structure should be available for the winter storage of the plants. This was met in the time of our forefathers by a building called an orangery. It was a rather heavily-built structure, with a slate roof, a blank wall at the back and front, and sides

go for several months without water. When water is given, however, it must be in sufficiently large volume to thoroughly soak the ball of soil and roots.

The common Bay, *Laurus nobilis*, is popular for terraces, grown either as a pyramid or a standard, but it is overdone, and there are other plants which might very well be substituted for it. A return to the old habit of growing standard Oranges for the purpose is to be commended, for when plants such as those at Mount Edgumbe and Margam are seen they command great respect. Unfortunately, the more easily-grown Bay has to a great extent supplanted the Orange. The common Myrtle, *Myrtus communis*, is another shrub which might be widely grown, for its fragrant

leaves make it popular, while its white blossoms and black or deep purple fruits are very showy. The small-leaved variety, *terentina*, is also an acquisition. Care must be taken to let the Myrtles develop freely, for they are not nearly so attractive when clipped hard, as is often done with the Bay. *M. Ugni* is another showy kind. *Clethra arborea*, the Lily of the Valley Tree of Madeira, is another excellent plant. It will grow quite 15 feet high, and is showy alike by reason of its dark green leaves and white flowers. Several well-grown and well-flowered plants were seen growing in tubs at Hampton Court a short time ago. *Acacia armata*, although usually considered purely as a greenhouse plant, may be used quite well as a terrace plant during summer, for it may be grown into a handsome specimen at least 10 feet high. The Pomegranates, *Punica granatum* and its variety *nana*, are well grown in some gardens, and when covered with scarlet flowers they are very handsome. Although more often included as a border plant, *Choisya ternata* is quite a good shrub for tub culture, its foliage and flowers alike being ornamental. Fuchsias may be used with effect, as also may large plants of *Hydrangea hortensis*.

Agaves are familiar objects in many gardens, although they must be used with caution in places where children are in the habit of running about, for the ferocious

A SEEDLING RHODODENDRON AT ITS BEST.



fitted with large windows, which reached from the top of the building to the floor. Between the windows rather wide stone or brick pillars were arranged. The building was unheated, save sometimes by a fireplace. As modern requirements go, such a structure would not be considered an ideal one for plants, but it served its purpose well, and there are gardens in the country where such an orangery is still put to its original use.

The essential points to observe throughout winter are that the plants must be very carefully watered and that fresh air must be admitted at all times. In the event of the soil being fairly moist when the plants are housed, they will usually

spines which arm the leaves are a source of danger. In sunny gardens the Oleander, *Nerium Oleander*, may be used with effect, although it rarely gives such good results in this country as are usual in Southern Europe. Conifers, as a rule, are not to be recommended for this class of work, but a great deal may be done with Camellias. When small plants are required, the Tree Ivies come in excellently, while some people form screens of trailing kinds to block out undesirable objects. Many other plants, such as *Escallonia macrantha*, *Elaeagnus* species, *Umbellularia californica*, &c., will suggest themselves, but enough has been written to direct attention to some of the best.

D.



TWO GOOD COTTAGE TULIPS:
Yellow : " Moonlight."
Pink : " Mrs. Kerrell."

THE FLOWER GARDEN.

SWEET PEA NOTES.

A Histon List.—Histon in Cambridgeshire has long been celebrated for the splendid crops of various kinds which excellent culture on good land has produced; but it has come into immensely greater prominence in recent years because it is the home and headquarters of Mr. W. J. Unwin, one of the cleverest of modern Sweet Pea specialists. He made his name with Gladys Unwin, which quickly became the most popular of all Sweet Peas for market culture, and in the seasons which have intervened since its introduction Mr. Unwin has not failed to give us novelties, and almost invariably they have been conspicuous for many good points and the fact that the proportion of trueness was always exceptionally high, this latter fact being attributable to the extreme care that is exercised with the Histon stocks.

In this present season Mr. Unwin is offering four novelties of his own raising. Mrs. D. Denholm Fraser may be most accurately described as an Earl Spencer Mrs. W. J. Unwin, which will suffice to mark it as a variety that must be grown by those who are partial to the refined flakes of these days. Muriel Quick has a white ground with light blue veins; the size and form are alike excellent. Victor Unwin is a deep chocolate that seems to be quite distinct from any other variety of the Spencer group. The Abbott was not raised by Mr. Unwin, but by Mr. W. Lumley, of Constance Oliver fame. It is peculiar in colour, though all of us would not regard it as strikingly attractive. The ground is very light grey, with suffusions and venations of grey-brown or brown. It would certainly be distinct in a stand of exhibition flowers, for which it possesses the necessary size and form. Dora Hopley is identical in colour with Mrs. D. Denholm Fraser, but it belongs to the smooth or grandiflora group. Mr. Unwin also offers several novelties of other firms' raising, as well as all the leading standard varieties. I must put in a brief word for Eric Harvey. It has not attained to the popularity to which its conspicuous beauty indisputably entitles it, and this is, perhaps, due to the fact that it thrives magnificently in some soils and districts, but fails to do itself anything approaching to justice in other places. It ought to be tried, and, if it fails, then it must go; if it succeeds, the grower will not require any inducement or persuasion to grow it again. At one of the August shows of the Royal Horticultural Society, Messrs. Bide and Son staged a vase of flowers of it that were superb in colour, size and form.

A Winchester List.—Those of us who have never wavered in our allegiance to the National Sweet Pea Society will remember the time when Mr. C. W. Breadmore came from Winchester and swept the boards in all the competitive classes in which he was entitled to exhibit, and thence onwards he has been prominent in the cult. From the early days he gave us novelties of outstanding excellence; but, unfortunately, they did not invariably come true to name. However, the merits

were unquestionable, and the varieties have lived where others of inferior quality have been long ago forgotten.

This season there will come from Winchester Aggie Elder, which is a real beauty in colour and form, but is near to two or three which are blessed with different names; the shade is glowing cerise. Princess Mary is blue, deeper in the wings than the standard, and the size and shape leave nothing to be desired in an exhibition Sweet Pea, while for the colour alone it ought to be grown for decoration. May Henderson is a pure deep violet of Spencer form, for which a place will have to be found. The additions to the cream pinks are bewilderingly numerous, and it is not always easy for the tyro to see striking differences. Mr. Breadmore's variety in this group is Mrs. Fred Arey. Iris, salmon, is too well known and admired to need special commendation here. Others which are offered in the same list are Frilled Cream; Lord Curzon, magenta; King Alired, orange pink; Jack Tar, blue; Mrs. Holroyd, maroon; Annis Gibson, purplish mauve; and Flossie Jeffery, a soft shade of Iris. There are, of course, the



A FINE BORDER OF MICHAELMAS DAISIES WITH EVERGREEN SHRUBS AS A BACKGROUND.

many standard varieties in addition to those named.
HORACE J. WRIGHT.

A BORDER OF MICHAELMAS DAISIES.

A BORDER of Michaelmas Daisies makes one of the brightest features of an autumn garden. When planted in a well-chosen site, for preference against a dark background of evergreen shrubs, a most cheerful effect is produced. A particularly well-planted border at Kew is seen in the accompanying illustration, in which the tallest-growing plants are kept in the background. The tall variety here depicted is Finchley White, while Feltham Blue and Robert Parker occupy the foreground.

There is no lack of varieties, and, in addition to those mentioned, a good selection would include Climax, clear light blue with flowers 2 inches across; St. Egwin, soft pink, 18 inches; Star Shower, creamy white flowers borne in profusion, 3½ feet; and Ericoides, with Heath-like foliage and small white flowers, 3 feet,

COLOURED PLATE.

PLATE 1458.

TWO GOOD COTTAGE TULIPS.

WHEN I wrote my notes on Tulips for last week's issue, I had no idea that such a plate as this was about to appear. If readers will refer to what I said there about Moonlight, they will see that my opinion of it is a very high one indeed. Its earliness and its beautiful pale primrose colour commend themselves to me. It is also a wonderful laster; otherwise it would not have been possible to paint these two varieties together. For as Moonlight is one of the earliest of the Cottage section, so Mrs. Kerrell is one of the later ones. Neither of them is a tall grower, and of the two the last-named is the shorter. As may be seen from the plate, it has a bloom of quite a different type to the exceptionally long flower of Moonlight, inasmuch as its petals reflex,

and in its young state (the top flower on the plate) it is vase-shaped or, as I have got into the way of describing such forms, "waisted." Unfortunately, the colouring of the plate gives one the idea that it had been to the rouge-pot before sitting for its picture. I have grown it for a long time, but I have not seen it so rosy. There is a good deal of amber or buff associated with the pale warm pink, and the whole is not without a suspicion of lavender. It is a very lovely flower, but a most difficult one to describe. I may mention that both varieties are very popular among the visitors to my garden. In common with all other kinds of Tulips, these may be successfully planted during the next week or two, or even well into December, though very late planting usually results in rather short stems. This, however, is not a very serious drawback, especially where garden decoration is the main object. The flowers from which the coloured plate was prepared were provided by Messrs. Barr and Sons,

JOSEPH JACOB.



A BOLD FLAGSTONE PATHWAY IN THE SUNK GARDEN BORDERING THE KITCHEN GARDEN AT CARROW ABBEY.

erect, and good habit of growth. It is also fragrant, a Continental Rose of merit, and distinctly above the average. It was one of a list of twenty new Roses that Mr. Mawley annually asks the opinion of the leading nurserymen and amateurs to place in order of merit, and I shall be much surprised if it is not found in the top half of the table. It has been well and frequently shown this season, and bears x x x in my own list as growing here, so those who have not grown it may, I think, add it to their list to get. It is one of the bicolors, two shades of carmine and pink.

Juliet (William Paul, 1910).—I do not grow this Rose, but I should not like my personal prejudice to prevent others from so doing. It has frequently been exhibited, and those who like its colour should not fail to try it. It is a very strong grower, but, producing its flowers at the end of each growth only, it cannot be called free-flowering. To my way of thinking its chief point of merit is its fragrance, which is very marked. I have heard it described by a lady as "the most beautiful" of all Roses!

Lady Alice Stanley (S. McGredy and Son, 1909).—Another bicolor, and possibly one of the best, as its flowers are held erect on good sturdy growths; colour, pale flesh pink, with the outside of the petal (which one must remember in a show flower is the side that shows the most) deep coral rose, a combination of colouring that is both pleasing and distinct. The flowers come of good shape, and I wonder more is not seen of it on the exhibition bench. It must be cut young, and resents

death. It is quite simple to grow them in an ordinary unheated greenhouse, but during the very severe weather in midwinter no flowers will be produced. During the autumn, spring and summer, however, excellent results should be obtained.

As plants to grow out in the garden there is little fear of frost killing them. Their greatest danger is excessive moisture at the root; therefore an open, well-drained situation is desirable. The plants will then flourish from June until the first severe frost of winter. There is no doubt as to their superiority over the ordinary border Carnation now that their hardiness has been proved.

In the matter of propagation, the common practice is to root cuttings from plants grown under glass during the winter and early spring, while layering is usual with plants grown in the border. MONTAGU C. ALLWOOD
Hayward's Heath.

it this autumn, so I must preach what I practise and say, "Not recommended."

Jacques Vincent (Soupert et Notting, 1909).—Beautiful, but not big enough for present-day standards. Not recommended.

Jonkheer J. L. Mock (Leenders, 1909).—This is a fine Rose, coming of good size, flowers carried



AN AUTUMN BORDER IN THE SUNK GARDEN IN THE GROUNDS AT CARROW ABBEY, NORWICH.

THE ROSE GARDEN.

NOTES ON NEWER ROSES. HYBRID TEAS.

(Continued from page 555.)

His Majesty (S. McGredy and Sons, 1909).—If one could only keep the mildew away, this variety would be worth growing; but it is almost as great a sinner in this respect as Her Majesty, and they would make an excellent pair for any mildew preventive producer to try his specific on before introducing it to the British public. For this reason it has been a disappointing Rose with me, and I have (reluctantly, I admit) discarded

tying. Habit of growth excellent, not particularly tree-flowering, but it is very fragrant. It was awarded the gold medal of the National Rose Society, and, I think, deserved it.

Lady Barham (Alex. Dickson and Sons, 1911).—This is a fine exhibition Rose of very large size; colour not unlike Maman Cochet, deep flesh pink; but it requires a warm sun to open its numerous petals. The growth is strong but robust, certainly not vigorous, and the flowers are, consequently, held erect. A dependable flower, guaranteed not to flag in the exhibition tent.

Lady Greenall (Alex. Dickson and Sons, 1911).—I am not sure that this Rose should not more fittingly be noticed under garden or decorative Roses; but I have had one or two such fine flowers that I am going to include it here, though it is undoubtedly a garden Rose first and all the time, and an exhibition Rose only occasionally. This is one of the aristocrats among Roses, not a great number of petals, but sufficient; a good grower, fine foliage, erect, fragrant, beautiful in shape and colour. The latter varies, but a deep creamy white outside petal, deepening to intense golden orange in the centre, very inadequately describes it.

Southampton. HERBERT E. MOLYNEUX.

(To be continued.)

THE KENT COMMERCIAL FRUIT SHOW.

ON more than one occasion we have referred to the slipshod methods of grading and packing Apples and Pears for market by growers in this country, and in our issue for August 31 we published an illustrated article by Mr. E. A. Bunyard on packing as adopted in Canada and other of our Colonies in the hope that it would be of assistance to growers in this country. That this system of grading and packing in boxes must be adopted if our home growers are to compete with the Colonial fruit that now holds the market, everyone in a position to express an opinion is agreed; hence the efforts of the Kent Fruit Growers' Association and the Wye Agricultural College in this direction are worthy of the highest praise.

The exhibition held in the Corn Exchange, Maidstone, on Tuesday and Wednesday of last week was, to put it in the words of a large Covent Garden salesman, worth pounds as an object-lesson to fruit-growers in this country. All the classes were for commercial fruits, *i.e.*, Apples and Pears,

as they would under proper, up-to-date methods be sent to market, and all had to be graded and packed in Federation boxes or half-boxes, these being the same size as those used in the Colonies. That the exhibition was regarded as of the utmost



A BOX OF PEARS PACKED AND SHOWN BY MESSRS. GASKAIN AND WHITING AT THE KENT FRUIT SHOW.

importance was demonstrated by the number of salesmen and commission agents from Covent Garden who attended on the first day, and who were eager to buy, at high prices, the best graded and packed Apples that were shown.

Undoubtedly the English grower at present is somewhat handicapped when competing with Colonial growers. Many good Apples that are grown in this country are unsuitable for box-packing, owing to their soft flesh, which is easily bruised, Warner's King and Peasgood's Nonsuch being cases in point. Then, again, home growers

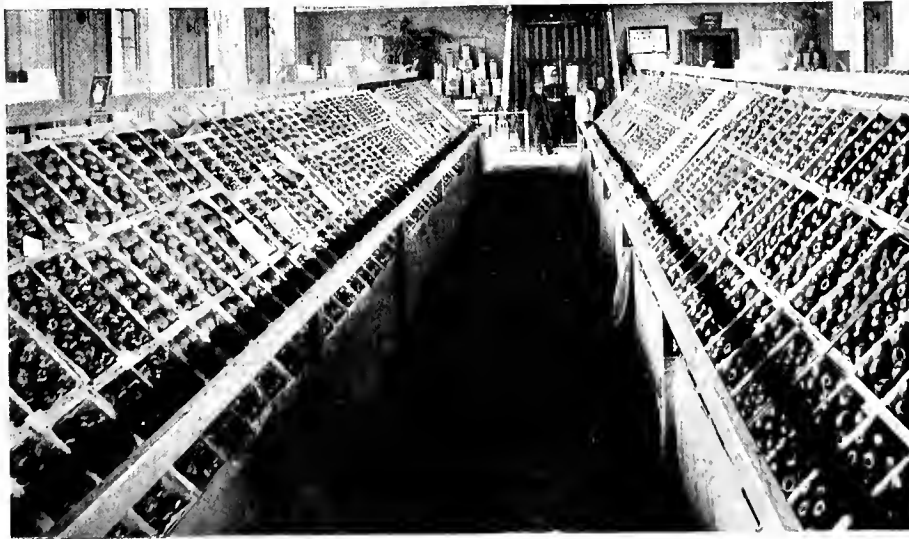
of the box. In either case bad bruising would result. That this bad packing was, in a large measure, due to improper or insufficient grading was very evident. It is impossible to pack Apples firmly and securely in boxes unless the fruits are all of one size, and home growers will need to pay close attention to this point in future.

Two grading-machines were at work in the exhibition, one being suitable for small growers, and the other, an automatic machine that will grade over a ton of fruit per hour, being recommended for those who grow and market large quantities of fruit.

Although in many instances the grading and packing of the exhibits left much to be desired, there were a number of boxes shown that were superior in quality and packing to any Colonial samples that we have seen. The six boxes of Bramley's Seedling shown by Mr. G. E. Champion of Mereworth, and which won the Coupe Challenge Cup for the best six boxes in the show, were perfect, and the leading Covent Garden salesmen present were unanimous in the opinion that nothing approaching them had ever been sent to this country from abroad. This proves that the home grower, providing he will see about setting his house in order and introduce up-to-date methods on intelligent lines, can compete with Colonial growers, in spite of the natural advantages that the latter enjoy, and regain at least a good portion of the custom that has been captured by the more up-to-date growers abroad. The cultivation of suitable firm-fleshed varieties, such as Bramley's Seedling, Ribston Pippin, Blenheim Orange and, for earlier use, Worcester Pearmain, is a point that will have to be very seriously considered; but the exhibition and demonstration at Maidstone last week proved beyond a doubt that it is by no means impossible for English growers to compete with those in the Colonies.

We were pleased to see Lord Lucas of the Board of Agriculture present, because there are many directions in which the Board could, if it would bestir itself, assist growers of fruit in this country.

At present very little of a really practical nature is being done; but, judging by the statements made by Lord Lucas at the luncheon, more will be done in future. The stamping out of diseases, or at least greatly lessening them, by legislation, and the appointment of inspectors to see that it is done, has already been attempted, to some extent successfully, and it was pleasing to learn that investigations and experiments of various kinds among fruit are to be conducted, under the aegis of the new Horticultural Board, at the Bristol University, the John Innes Institute and Wye College. But,



GENERAL VIEW OF THE APPLES SHOWN AT THE KENT COMMERCIAL FRUIT SHOW.

have yet much to learn in the way of grading and packing. A careful survey of the exhibits staged at the show revealed the fact that a great many boxes were either packed too loosely or the fruits were bulging out too much above the surface

after all, growers must very largely work out their own salvation. As Mr. Dunstan, the Principal of Wye College, remarked at the luncheon, English growers have been too long content to hide their light under a bushel—the old bushel sieve, we presume.

GARDENING FOR BEGINNERS.

A LIVE GARDEN SHELTER.

WHERE there is space available in the garden or on a lawn, a structure such as that depicted in the illustration makes a novel and beautiful little summer-house. It is composed of withes—the young lithe growths of the Willow used by basket-makers. These should be procured at any time between November and February, and each be 9 feet to 10 feet in length.

When about to construct such a summer-house, a decision must be made as to the desired circumference, but this should, preferably, be not more than 12 feet. The plan should then be staked out and a trench 18 inches deep dug out round the stakes save for a narrow space where it is intended the opening shall be. It is well to arrange that the opening faces the morning sun; this will ensure that the interior is warmed up occasionally, and that the later, hotter rays of the sun are excluded when the shelter is likely to be occupied.

Having dug the trench, the withes are planted at intervals of 2 inches and rammed down very firmly. When all are planted, the tops are bent inwards—interlaced where possible—and secured together by string, thus forming the roof. Then, beginning near the ground, lengths of the withes are interwoven, basket fashion, among the uprights all around, and the process is repeated right to the top, with intervals of about one foot between them. Here and there, but not too frequently, these horizontal binders should be secured with strong bast to a stout upright, thus ensuring greater rigidity. Slips from the common Willow strike so easily that by the beginning of May the withy wigwam will have taken root and the young growth be showing at every eye throughout the structure; and with the advance of summer the whole will be a cool, shady nook and a decidedly picturesque addition to the garden.

W. JAMES ROBERTS.

HINTS ON PURCHASING ARTIFICIAL MANURES.

THE valuation of manures quoted in an invoice, so as to get at their cost per unit, is a simple matter, and it affords a rough-and-ready indication as to value received. It is a little more complicated where a compound manure is under consideration, but it is in all cases a necessary process, as one manure can be readily compared with another in value by no other rapid and reliable method.

The Fertilizers and Feeding Stuffs Act is precise and simple in defining what is required, as this is confined to a statement of the percentage

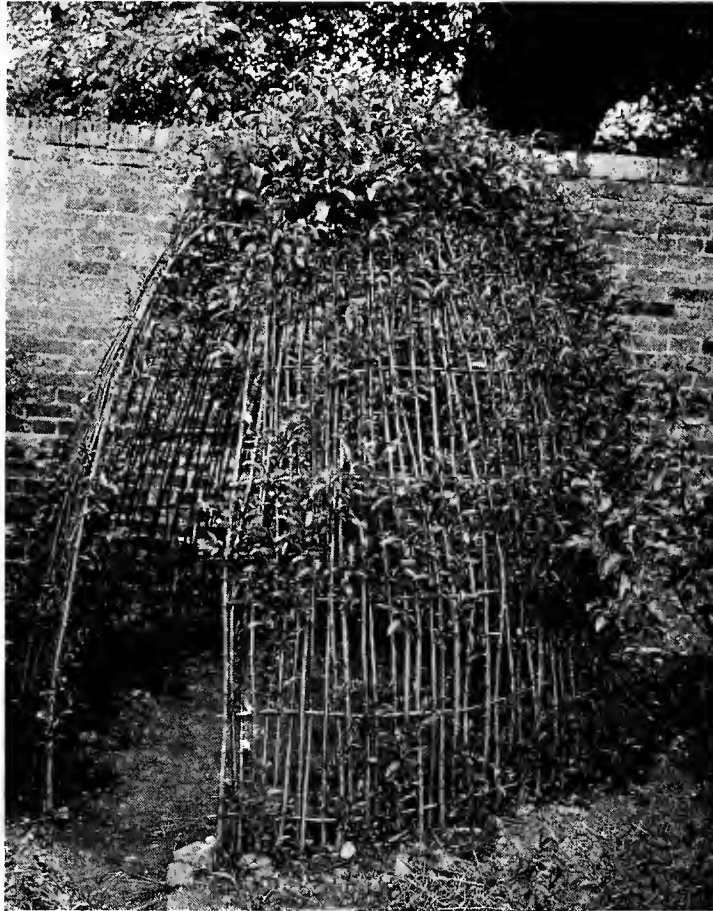
contained of nitrogen, soluble and insoluble phosphates, and potash. If these terms are adhered to in the invoice, the price per unit is easily ascertained, and they should be insisted on. If subterfuges in the form of analogous or misleading terms are quoted, instead of these, the buyer is not so sure of his ground, because the chemical composition can be altered to match them in a variety of ways. For example, if the potash is quoted as "potash salts," the percentage may represent only about

most likely to overlook the discrepancies of description. These may be put down as "total phosphates," *i.e.*, both soluble and insoluble together, a very misleading way of stating the percentage, because the insoluble may or may not be of value, according to the kind of manure.

Another stumbling-block is the expression "bone compound," at any rate where only dissolved bones are required, because it may contain phosphates from various sources as well as bones, a good deal cheaper and perhaps more insoluble. For it is especially to be noted that the Act does not stipulate for a statement of the source whence any manure-making material is obtained, only *how much* of the ingredients mentioned it contains. It is for this reason that, in compound nitrogenous manures especially, it is impossible to get at the correct value from the figures, because the sources of nitrogen are so varied; and in the organic form, which is largely used in compound manures, the value differs a good deal, though all appears as "nitrogen." This is unavoidable, and, if the purchaser is not satisfied, it is best to buy a manure of known origin, such as fish, blood, or meat, of which the prices can be readily compared together on their known merits.

It is well to bear in mind that, under the Act of 1906, purchasers are further safeguarded. One rather important clause provides that the actual percentages must be stated, and not merely the minimum, in the case of manures artificially made, for it is in them that most of the variation occurs.

GERVAISE TURNBULL, F.L.S.



A LIVE GARDEN SHELTER MADE WITH OSIER WANDS.

half the equivalent of pure potash—the amount found in sulphate or muriate of potash—or very much less. These two are far more concentrated, for example, than kainit, which only contains about twelve per cent. of pure potash, and it is for this reason that kainit is best applied a little ahead of crop requirements, so that the accompanying impurities may be washed out.

Another point that puzzles some people is "nitrogen equal to ammonia," whereby the latter appears greater than the former in amount by the proportion of 17 to 14, because ammonia contains three parts of useless hydrogen. It is an old custom without much, if any, meaning, and the buyer should see that he does not confound the two. It is, perhaps, with phosphates that the buyer is

are over. The first, *Aconitum Wilsonii* (one of Wilson's introductions from China), is a tall, bold-growing plant that will reach a height of 5 feet to 6 feet. The flowers, borne in an erect, terminal spike, are of a pleasing shade of violet blue, with the hood-like portion of the flower much developed. In this species, when the blossoms on the terminal spike are past, secondary ones develop rapidly and continue the display for some time. The other species, *A. Fischeri*, has in some unaccountable way been confounded with the preceding, but it is quite distinct therefrom. This only reaches a height of 18 inches to 2 feet or thereabouts, has pretty glossy leafage, and the flowers, which are of a lighter blue, are borne in shorter and denser spikes.—H. P.

TWO LATE - FLOWERING MONK'S-HOODS.

Two Monk's-hoods well represented in the long herbaceous border at Hampton Court, are not only valuable for their highly-ornamental qualities, but also for the fact that they bloom in the autumn, when nearly all their relatives

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Hyacinthus candicans.—This stately bulbous flowering plant is of easy culture, and will thrive equally well in the herbaceous borders or in a piece of ground that has been well worked in the shrubberies, and, being perfectly hardy, may be planted now.

Herbaceous Borders.—Undoubtedly, if it can be arranged, the present is as good a time as any for replanting or carrying out any alterations in connection with these, as by so doing the plants get settled before really hard weather sets in.

Spring Bedding.—Complete any planting that may be in arrears, both of plants and bulbs, as speedily as possible, always reserving a few plants of each subject for making good any gaps in the spring. Last year especially Wallflowers and *Myosotis* fared very badly. Continue to plant bulbs for naturalising, and the surroundings under a tree that has a clear stem in the smallest garden can be made a beautiful sight by planting indiscriminately the various coloured Crocuses. Erythroniums, Muscari, Scillas, Aconites and Snowdrops may all be planted in various open positions with the same hope of success, and the sooner it is accomplished the better.

The Rock Garden.

Tellima grandiflora.—This plant is now with us one of the most beautiful sights in the garden, and deserves planting entirely on its merits for autumn colouring, continuing good for a lengthy period. Such a plant as this, when placed near to some of our silvery-foliaged plants, is seen to the best advantage, and all should bear it in mind and include as many plants as possible, which are a source of attraction when the bulk are past.

Viola pedata bicolor.—This has been in flower now for some time, and the beautifully-coloured flowers on long, stout stems cannot fail to be noticed. This is a plant that one can thoroughly recommend.

Plants Under Glass.

Roses.—Where very early blooms are in request and the means permit of obtaining them, a few plants should be introduced at once. The pots should be well washed, the drainage made clear, and a little top-dressing afforded the plants after the necessary pruning has been done. Any Roses now in the stove may be potted with advantage, as they will be found to root well when placed back and plunged in leaves or ashes. Avoid over-potting, use just sufficient but perfect drainage, and cover the crocks with some turfy loam. The compost will consist principally of loam, to which should be added some lime rubble, wood-ash and a little soot, and, according to the nature of the loam, so vary the proportion of leaf-mould or spent Mushroom-bed manure.

The Hardy Fruit Garden.

Root-pruning.—Hardly a season passes but what one finds some tree or another which would not benefit by this operation, and it is also one of the most interesting to observe. Young trees, especially until they become established and fruitful, often require the main roots curtailed each year, especially when planted near to a border of particularly good soil, as is often the case. Commence by taking out a trench round the tree, starting from a radius of 2 feet to 3 feet, according to the size, but preferably the latter distance. Then with a fork gradually work away the soil from the ball into the trench, combing for the roots, and cut back any gross growers devoid of the fibrous roots so essential to a good fruiting tree. Any damaged roots should also be cut away with a sharp knife, and always from the under side in a short slant towards the operator. Gradually put back the soil, place any roots in position, and for stone fruits add some lime rubble to the soil and make quite firm by treading.

Fruits Under Glass.

Figs.—For very early supplies of Figs under glass, the trees, whether in borders or accommodated in pots, should be got in readiness and everything prepared for the time to close the house. Figs are frequently dirty subjects, very liable to

infection with mealy bug, and while the trees are dormant every effort should be made to rid them of this pest. Undoubtedly the best method is to cyanide the house, and when properly carried out by a capable person there is little danger. Successional washes with paraffin emulsions and thorough cleansing of the house and woodwork will do much to combat the trouble. As soon as the plants are subjected to a little heat, and before growth gets too far advanced, on a bright day many insects may be killed by touching them with a little methylated spirit.

The Shrubberies.

Planting.—This may be carried out at any time when the weather and state of the ground permit. On heavy lands, if possible, avoid doing so when the ground is too wet. The variety of material is very wide, and subjects suitable for all positions may be found. For general effect in the shrubberies aim at a suitable intermingling of evergreen and deciduous subjects, so that too much bareness does not exist at this season, and plant so that the season of flowering is prolonged. Evergreens make a fine setting for the flowering shrubs, and if the commoner ones are utilised in the background, they make excellent shelter for more tender shrubs.

The Kitchen Garden.

Jerusalem Artichokes.—As soon as convenient now, cut down the stems of these plants and burn them with other refuse on the smother fire. Lift a few of the tubers if wanted for immediate consumption, but the bulk are better left in the ground for a time. The best way is to start at one end and prepare the ground for planting next season's crop.

Globe Artichokes.—These ought now to be well protected from frost by placing some protecting material, such as leaves or long strawy litter, round the crowns.

Parsnips.—This crop is better for remaining in the ground and left to the frosts. In the event of hard weather, however, a few roots should be lifted and placed away from the air for convenience.

Onions.—Handle the large bulbs as little as possible, but see that these and the rest of the crop do not suffer through any decay.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Hollyhocks.—It is a mistake to destroy these annually after flowering, for though usually treated as biennials, plants live for many years and form very handsome specimens. My plan after cutting over the old flowering stems is to place a few spadefuls of soil around each plant as a winter protection.

Humea elegans.—Do not err in placing plants of this elegant flower in a heated house. It is nearly hardy, and, if kept free from frost, the less artificial heat it receives the better. The plants will ask for the minimum of water at the root under these conditions, but it must not be forgotten that dryness at the root is almost certain to result in the death of the plants.

Spanish Irises.—This is a proper time to plant bulbs of these. They are apt to die out, but this seems to be a result of under-feeding. Most bulbous plants esteem a rich soil, and these especially so; therefore see that the ground is properly prepared before planting. Old clumps or beds should be surface-dressed with Mushroom-bed manure, pigeon or poultry manure and soot, mixed together in about equal proportions, applying it 1 inch thick.

Tulips.—These also should be planted without further delay in ground deeply enriched with rotted manure, and a surface-dressing similar to that just noted spread over the surface. Pheasants and rats are so fond of the roots that it is hardly possible to grow Tulips where these are abundant. Wire-netting of 1½-inch mesh laid above the bulbs and 2 inches below the surface is perhaps the best means of circumventing both.

Helleborus.—At the time of writing, two species are in flower, viz., *H. altifolius* and the sweet-scented greenish yellow *H. odoratus*. Through the winter these will be followed by others. Those

named and the niger section are splendid for cutting, but the flowers should be gathered young or not fully expanded, when their lasting qualities are improved. It is a great mistake to interfere with the plants at this period beyond removing foliage that is unsightly.

Lawns.—All foliage of deciduous trees and shrubs will have fallen by this time unless it be Oaks, and, if so, the grass should be cleanly swept, and any long grass that has escaped notice earlier in the year be cut close under the shrubs. If any planting of bulbs remains to be done on the outskirts of lawns, it should be completed. Limes are apt to throw suckers from the base. These I make a practice of removing while still soft. In any case they should not be left over the winter, but trimmed quite close to the bark, discolouring the cuts with moist clay afterwards.

The Plant-Houses.

Watering.—In greenhouses the greatest care ought to be taken not to spill water on the pathways, and by carefully estimating the quantity of water required to moisten the soil in the pots, none need fall from them on to the stages. The successful plantsman at all times applies water on this principle, but now it is essential for all. Crotons and many other plants which have finished growth will ask for very little water at the root. If syringed, that will be sufficient for days; but if the temperature is kept very low, syringing must be discontinued.

House Plants.—In living apartments these will need frequent watering, usually every day, a simple plan being to keep the saucers supplied with water. Change the plants at short intervals, not only on account of a change being appreciated, but also because most plants do not suffer from a brief period in the usually deadly conditions for plants that prevail in houses, and are therefore available for use after a time in the greenhouses. *Aspidistras*, *Pandanuses*, *Dracenas*, *Aralias* and the more hardy Palms that can be left a long time should be regularly rubbed with a dry cloth to remove dust.

Greenhouse Climbers.—Such things as *Kennedias* and *Lapagerias* are apt to become overthick with growths and entangled, and may now be seen to, the superfluous and obnoxious shoots removed and those preserved neatly tied in, washing such as require cleansing before doing so. It is a never-ending recommendation to remove weakly growths from all kinds of climbing plants, the unobservant never arriving at a knowledge of their utility.

The Kitchen Garden.

Mushrooms.—If a fresh bed is ready for spawning, it ought to be ready for Christmas, or a bed made up now might be in time, or at least for the New Year. Be very careful in the application of heat. Fresh air is essential to the sweetening of the Mushroom-house, and moisture must not be forgotten as a means of securing the proper conditions.

Celery.—Finish earthing-up the latest trenches, forming the soil into a sharp slope and making it as firm as possible to prevent it retaining wet as far as may be. We had an attack of rust in August, and have been applying flowers of sulphur ever since. White sorts escaped, but some reds were very much affected.

The Fruit Garden.

Peaches.—Young trees may be lifted with a good ball of soil attached, the longer roots to be shortened and the trees replanted without delay, adding some loam and making the looser soil firm. Young Apricots and Plums may be treated in the same way, the latter usually making shoots much too gross if not lifted and replanted in this manner.

Planting.—Nursery trees as received should be planted with the least possible delay, the practice of laying in the trees for a more convenient season being one that cannot be commended. While one need not go to the extreme of trimming the damaged roots with an upward slope—a very old practice—do not huddle them close together in a round hole. Spread out the roots 6 inches to 9 inches below the surface, and firm the soil about and above them, finishing with a stake to support the tree from wind-sway. If a mulch is applied, cover it with a little soil to hide the material and to keep birds from spreading it over the border.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

NURSERY NOTES.

MESSRS. GEORGE BUNYARD AND CO., LIMITED, MAIDSTONE.

THIS well-known firm, whose headquarters have been at Maidstone ever since the business was started in 1796, has long been noted as one of the most up-to-date in this country so far as fruit trees and herbaceous plants are concerned. Indeed, trees from the extensive nurseries at Maidstone and Allington must now be finding a home in thousands of gardens, not only in Great Britain, but in all quarters of the globe. At the time of our visit, during the second week in September, we were more concerned with the fruit trees than other subjects, and for that reason wended our way direct to the Allington nurseries, where about one hundred acres are devoted to this branch of the business. Here we found all kinds and all forms of fruit trees, from maidens to trained specimens six or more years old. The soil was ideal and the trees were splendid. During recent years there has been a large demand for pyramid and bush trees on Paradise or other dwarfing stocks, and it was interesting to note that Messrs. Bunyard, to keep well abreast of the times, have a number of extensive and well-cultivated plots devoted to these. Here one can select Apple, Pear or Plum trees of whatever size or age they may require, those which have passed their second year being in a condition to bear fruit as soon as established in their permanent quarters. Standard and half-standard trees, too, were there in great profusion and of all ages, so that those who have orchards or big plantations to make can have trees for almost every kind of soil and situation they may encounter. And the varieties are as numerous as the forms of the trees. Naturally, some sorts are more in demand than others; but after inspecting the extensive stock under the guidance of Mr. E. A. Bunyard we came to the conclusion that it would be very difficult indeed to name a variety which was in any way worthy of cultivation that the firm could not supply.

A dessert Apple of which they are justly proud, owing to the fact that they realised its possibilities before other firms, is Allington Pippin. It is, of course, now well known, thanks largely to the efforts of Messrs. Bunyard. It is a free-cropping variety that does well on nearly any kind of soil, and is of excellent flavour and just the sort for the amateur who has not a lot of space at his disposal. Baumann's Red Reinette is also an excellent Apple for a garden where space is restricted. True, its quality is not so good as that of Cox's Orange Pippin, but it is a pleasant Apple to eat and crops freely nearly every season. A batch of young trees of this variety that we saw were exceedingly beautiful with their heavy crops of brilliant scarlet red fruits. Hitchin Pippin is another good dessert Apple that Messrs. Bunyard think highly of, and rightly so. It may best be described as an early King of the Pippins, being in season at the end of September and during October. The flavour is excellent, the tree has a good habit, crops freely, and the fruits are highly coloured, so that it ought to prove a good market Apple.

Among culinary Apples, Messrs. Bunyard give a high position to Norfolk Beauty, a large, solid Apple that somewhat resembles in appearance Warner's King, except that it has a ring of russet around the stem. Early Victoria is an early

Codlin variety that bids fair to oust Lord Grosvenor from its high pinnacle. It crops equally as freely, the fruits are of grand flavour and larger, so that it has everything in its favour. Hambling's Seedling, although it does not crop very heavily until well established, is also a variety that Mr. Bunyard thinks very highly of. Royal Jubilee, which has found so much favour on the Continent, was introduced by the firm, and we were privileged to see the original tree whence all the stock has sprung. It is now a large specimen, with a trunk nearly a foot in diameter. Although we can only mention these few varieties in passing, it does not mean that there were not others worthy of inclusion. Far from it, because there were all the best recognised sorts in great abundance and in as healthy a condition as one could wish for. Indeed, the absolute cleanliness of the stock, in a season like the present, surprised us very much until Mr. Bunyard explained that every year a certain amount of new farm land is taken in for the young fruit trees, so that a perfectly clean start is assured.

As with Apples, so with Pears, Plums and Cherries. We have already made passing reference to the trained trees of these, and, taken as a whole, we never remember seeing a better lot. Such good varieties of Pears as Beurré Hardy, Louise Bonne of Jersey and Conference were there in their thousands, and the heavy crops many of the young trees were carrying proved that the right system of pruning and training to induce fruitfulness had been adopted. Small fruits, such as Gooseberries, Currants, Raspberries and Strawberries, are all grown in very large quantities, the firm having for many years made a speciality of Strawberries. Nuts, too, for which the county of Kent is world-famed, also find a home in the Allington nursery, and anyone who wishes to secure plants of the genuine Kentish Cobs and Filberts can rest assured that they can be obtained here.

The cultivation of fruit trees, such as Apples, Pears, Plums and Cherries, in pots is now very largely adopted in many gardens, and those who visit the Royal Horticultural Society's autumn shows will know that Messrs. Bunyard are past-masters of the art. Their orchard-house is a lofty, span-roofed structure, and trained up the pillars and along the girders are cordon Pears, these being planted out in the natural soil. At the time of our visit the pot-grown trees, which had been in the house, were accommodated in a skeleton house covered with wire-netting, and some very beautiful examples there were. In growing such fruits in pots a great deal depends upon the judicious selection of the trees at the outset, and, judging by what we saw, we should say that Messrs. Bunyard have an excellent stock of all kinds suitable for the purpose.

When we inspected the Roses, we found the same cleanliness and attention to detail apparent. All the bush sorts in particular were wonderfully good, and we have seldom seen better breadths of such varieties as Lyon, Pharisæe, Caroline Testout and Mme. Abel Chatenay. Many of the standards, which looked exceedingly well, were budded on the rugosa stock, which in the opinion of many is better for a number of purposes than the Briar. Certainly it transplants much more readily and does better on light soils than does the Briar.

In addition to an extensive stock of herbaceous and alpine plants, which are grown in their Maidstone nursery, Messrs. Bunyard have a very fine stock of hard-wooded ornamental trees and shrubs, including Rhododendrons and Azaleas, hardy

Heaths, Daphne Cneorum, Japanese Maples, Tamarisks of various sorts, including the beautiful *avetialis* or *Pallasii* rosea, Hypericums, Berberises, Thorns and numerous kinds of conifers.

The few foregoing notes, brief though they are, may, perhaps, serve to indicate to some extent the extensive business that is carried on by Messrs. George Bunyard and Co. in a county that has long been known as the Garden of England.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

BORDER OF ANNUALS AND ROSES (K. M. K.).—The undue legginess of all the plants is doubtless due to an excess of shade, and in a small enclosed area this would of necessity be enhanced. Certain annuals do not object to partial shade, provided it is not too dense, and Poppies, Larkspurs, Bartonias, Lupines, Asters, Stocks, Snapdragons, Linums, Marigolds and Eschscholtzias are worthy of trial in the circumstances. You could, of course, treat the border entirely as a shady one, and grow Lilies, Primulas, Polyanthus, Violas, Phloxes, Irises and much else that would do quite well. Roses that would be likely to suit your purpose are American Pillar, Hiawatha, Griss an Teplitz, Philadelphia Rambler and Lady Gay, and these could be employed in conjunction with Clematis Jackmanii superba, C. Mrs. G. Jackman and C. Miss Bateman.

INCREASING AUBRIETIAS (E. P.).—You failed in this matter because the method, material chosen and time selected for doing the work were all wrong. Had you, when the plants had finished their flowering, closely cropped them over with scissors or shears, pricked up the soil around, given a light mulch of new soil, and watered and encouraged fresh growth for a few weeks, you would have had no difficulty in increasing your stock of plants. After such a preparatory course of treatment you could have lifted your now reinvigorated plant—you dealt with the other plant during a period of reduced vitality due to flowering—shaken or washed away the soil, and divided it as freely as you wished and with impunity. Such divisions in early September could have been firmly replanted in well-prepared garden soil; there would have been no occasion for potting them off. Moreover, young cuttings or slips would at the same time have been available in plenty, and these torn off with a heel attached and inserted in sandy soil without more ado would have rooted quite freely. In early April, had you curtailed the growth a month previously, the plants could have been lifted and divided with equal success at that season also, though of necessity the season's flowering would have been sacrificed.

CARNATIONS AND SOIL (E. G. Fawcett).—There were no insect pests in the sample of soil submitted, though for Carnations it would be considered too light, and the addition of lime and loam of a stony or heavy nature might to some extent prove helpful. The sunless position, naturally, is not of the best, though we imagine the fault to be due to the plants themselves rather than to the other things named. From what you say of the plants we should imagine that the Carnation maggot is largely responsible for the failure, though that could only be definitely settled by our seeing the afflicted plants. If the plants are of your own raising and from layers, you might put them to a test of hardness or otherwise by potting and framing them for the coming winter, and, if maggot was the cause, an earlier evidence of its effects would be forthcoming. Often following the attacks of this pest, a swelling of the stem—the result of rupture owing to the movement of the maggot—is seen, and at such a time the end is not far off. If you could send a sample of the plant, we could tell you if it is healthy or not. There may be other causes of the failure of which we have no information. Are the plants well rooted when put out? Is the stock an old one, long grown in the garden or locality? If so, these may affect it.

PLANTING PRIMULAS AND IRIS KÆMPFERI (*M. J. R.*).—The first-named, *Primula japonica*, could be put out at once, as by so doing the roots would take hold of the soil before spring, and thus enable the plant to make the best growth in its season. The best time for planting the Iris is early April, when growth and root fibres practically come away together. If planted during late autumn, an indifferent growth often ensues, though to some extent this depends upon soil and surroundings.

ROSE GARDEN.

NAME OF ROSE (*Lady Franklin*).—The Rose is certainly Frau Karl Druschki and not Grand Duc de Luxembourg. This latter should be a rich rosy red, the reverse of the petals brilliant lake. It is a fine Rose for bedding, and a very vigorous bush.

INJURY TO ROSE FOLIAGE (*Barholm*).—The foliage you send is badly affected with red rust or orange fungus. You cannot do much now to check the disease, but we advise you to gather the worst leaves and burn them. In winter remove the surface-soil to a depth of 2 inches or 3 inches and burn it; then in spring, soon after pruning, spray with Bordeaux mixture and repeat it every week.

STANDARD ROSES BLIGHTED (*M. H.*).—The foliage sent is badly affected with orange rust or orange fungus. It has been very bad this year, and it seems to us to be worse upon Roses imported from the Continent. You can do very little now except to remove all the fallen foliage and burn it; then have the surface soil burnt to a depth of 2 inches or 3 inches. Next spring, after pruning, spray with Bordeaux mixture, and continue this at frequent intervals.

SEEDLING ROSES (*E. L. W.*).—It would have been better if you had planted out the little plants in September, but it is too late now. Keep them in a cold frame until April, then plant out. They are very liable to damp off, so it is well to keep them on the dry side. If they are from very choice seed, it would be advisable to keep them in the greenhouse; and if they commence to put out new growths, do not check them, but just keep them gently growing and then plant out in May. Do not prune at all.

FORCING RAMBLER ROSES (*E. N.*).—These beautiful Roses, in order to have them in bloom by May 1, should be placed in a cold frame early in December and pruned at the beginning of the New Year. You must retain as much as possible of the long growths made this summer, but side growths are best cut back to one or two eyes. Start the plants in a temperature of 45° by night and 50° by day, and increase this to 50° by night and 55° by day as growth advances. If they appear to be coming on too fast, you can regulate them by affording top ventilation.

VARIOUS QUERIES (*Kanyaroo*).—The four Roses you name are of quite easy culture. Rayon d'Or should be grown in a bed by itself, as its wonderful daffodil yellow would not blend well with yellows of other shades. Sunburst and Lady Hillingdon would go well together, but Lady Pirrie would blend better with Roses such as Mrs. A. R. Waddell or Arthur R. Goodwin. 2. Aurora would be a good coppers yellow China to plant with Laurette Messimy. Queen Mab is also a nice soft apricot shade. 3. Gottfried Keller is a rather difficult Rose to establish; but if you encourage good young growth by pruning back hard in spring, we think you will find it flourish all right.

PRUNING ROSES BEFORE TRANSPLANTING (*M. M. T.*).—It will not be necessary to cut the Rose back very much at the time of replanting. Just cut away the soft wood and remove all foliage; then in March prune the growths made this year back to three or four eyes from their base. The weeping standards will require little or no pruning in the coming spring, as you say they were cut back hard at the time of planting last year. When they have flowered next summer, you should cut away some of the flowering growths, in order to encourage new growths for the following season's bloom. If you have the chalk well broken up and add some humus, such as leaf-soil, spent Hops, chopped turf, &c., you will be able to grow good vegetables; but on all chalky soils it is well to mulch the surface well with rotted manure or spent Hops during hot weather to conserve the moisture.

ROSES IN CHALKY SOIL (*M. M. T.*).—As there was only about six inches of new soil given last season, we should advise you to replant the Roses in November. Just dig them up and put the roots in a trench, covering them well with soil. They will then be quite all right while the beds are renade. Take out another 9 inches of the chalk; then, when putting in the new soil, add a liberal quantity of cow-manure, and you might work in a little well-rotted manure with the remainder of the soil. This will be much better than digging in manure to the beds as they are. In the fine Rose garden at Downside, Leatherhead, the owner, Alfred Tate, Esq., had to have many hundred tons of chalk removed and replaced with soil before this garden was formed, and the splendid condition of the plants amply repaid him for this great expense.

THE GREENHOUSE.

PARSLEY FERN (*CRYPTOGRAMME CRISPA*) (*Purpurea*).—This plant is quite hardy, and may be grown outside in the Fern border, but should be planted in loose stony ground or between two large stones where it will never get dry. It may also be grown in a pot in a cold frame which is shaded from the sun. Cold greenhouse treatment is also suitable for the Parsley Fern.

THE CULTURE OF TYDÆAS (*L. A. H.*).—Tydæas are a very pretty, free-flowering race of gemmiferous plants. They will continue to bloom throughout the greater part of the year; in the greenhouse during the summer, but in autumn, winter and early spring they succeed best in a warmer structure. A winter temperature of 50° to 55° will suit them well.

ODONTOGLOSSUM CRISPUM (*Anxious*).—The shoot sent would indicate that water has been allowed to collect at the base of the young leaves, and this, owing to the dull, cold weather, would do harm. This may have been from overhead watering or syringing, or even when sponging. You do not say whether you used any insecticide when sponging; if so, it may have caused the damage. While we find traces of thrips, we have not been able to discover any of the insects; hence we conclude that they have all been killed by fumigation.

THE CULTURE OF CUPHEAS (*L. A. H.*).—Cupheas need just about the same treatment as the Heliotrope; that is to say, they winter better in a temperature of 50° to 60° than in a structure from which frost is just excluded. One species—*Cuphea ignea*, or platycentra—is extensively used for summer bedding. It is a bushy plant that bears a great profusion of tubular flowers. It, as well as the others, forms very pretty decorative plants for the greenhouse. They will succeed under the same general treatment as the Heliotrope.

SALVIA PRIDE OF ZURICH (*L. E. G.*).—The plants may be wintered in the greenhouse, taking care not to overwater them. With the return of spring young shoots will be freely pushed out, and when these are about a couple of inches in length they make the best of cuttings. They should be treated just like cuttings of Fuchsias, that is, dibbled into pots of sandy soil, and kept close and shaded in a propagating-case till they are rooted, which will not take long. If the atmosphere is too dry, red spider is apt to attack the leaves in the spring.

BEGONIAS (*H. A. S.*).—It is absolutely impossible to state any definite cause for your Begonias dropping their buds, as you say nothing whatever concerning the conditions under which they are grown, except the size of the pots they are in and the fact that the house is shaded during the greater part of the day. The trouble, however, may be caused in various ways; for instance, the roots may be kept too wet or too dry, or the pots may be full of roots, so that they would be benefited by a little stimulant. An excess of stimulants, too, would have the same effect. If the plants are attacked by thrips or the Begonia mite, many of the flowers will drop before opening. By far the most satisfactory plan would be for you to get some practical person to see your plants and the conditions under which they are grown, as he would then be better able to advise as to their treatment.

BEGONIAS AND GLOXINIAS (*East Anglian*).—As far as can be judged from your letter, there seems no reason why your Begonias and Gloxinias should die off in the way they do. We cannot help thinking that somehow or other the frost has access to them. The stimulant named would have had no injurious effect unless it was used very strong. As you have had such a poor measure of success by keeping the plants in the spare room, we think it would be a good plan to try them during the forthcoming winter in the structure where they have been growing, that is if it is kept quite safe from frost in the winter, with a temperature of 45° to 60° at that season. The minimum of 45° represents, of course, the lowest night temperature. During our years of experience we always shook out the tubers clear of the soil after they became quite dormant, and laid them in trays of fine sandy soil or pure silver sand. If the material got too dry, it was occasionally damped; but this was not necessary in the depth of winter. There is no preservative in which the tubers can be dipped. When the season of growth is ended, the drying off should be gradually carried out.

FRUIT GARDEN.

PEARS DESTROYED BY BIRDS (*A. R.*).—Black rags tied to the tree will often scare away birds. Lines of black thread fastened here and there between the branches is an excellent preventive. Birds, as a rule, will not attack Pears until the time of ripening commences, and it may be that in consequence of the dry and warm April your fruit is ripening earlier this year. The way to find this out is to cut a fruit and examine the seed. If it is quite white, the fruit is not approaching ripeness; but if it is turning brown, this is a sure sign that the ripening process has commenced, and the fruit may be gathered. Rather than let the fruit be wholly destroyed by the birds, we should prefer to gather it at once and store it in a cool room. It will be ripe earlier, no doubt.

APPLE TREES ON GOLD CLAY LAND (*R. P.*).—You do not say whether the land is well drained or not. It would be courting failure to plant Apple trees on such land unless it is well drained. The cheapest way of preparing the soil will be to have it steam-cultivated, breaking it or stirring it to the depth of at least 2 feet, and then throwing up the soil into fairly high ridges, or mounds as you call them, the whole length of the ground for each row of trees. This would help to raise the temperature of the soil as well as drain and aerate it. In planting in soil of this description it will be necessary to select such varieties only as are most likely to succeed, because it would be a fatal mistake to plant weak growers or those inclined to canker in soil of this character, such as Cox's Orange Pippin, Ribston Pippin, Lord Burleigh and many others of good quality, which, however, are known to be weak growers. We suggest the following six sorts on the free stock (Crab): Early dessert Apple, Worcester Pearmain; midseason dessert Apple, Allington

Pippin; late dessert Apple, Barnack Beauty; early cooking Apple, Ecklinville Seedling; midseason cooking Apple, Lord Derby; late cooking Apple, Bramley's Seedling.

MISCELLANEOUS.

INJURY TO ROSE AND VINE LEAVES (*M. E. R.*).—The Rose and Vine leaves were apparently attacked by aphides earlier in the year, and the blackish spots upon them are due to the growth of a fungus on the excrement of the insects. We should advise a thorough cleansing of the house during the winter, and of the trees also, and if the aphides appear again in the spring, immediately fumigate with one or other of the excellent fumigants now on the market.

BLANKET WEED IN PONDS (*Mrs. Hugh Graham*).—You cannot do better than apply sulphate of copper to the water in your pond at the rate of one part to 750,000 or 1,000,000 parts, or you may even use it at the rate of 2oz. to 10,000 gallons of water. Apply the sulphate of copper in a canvas bag, and trail it through the water until dissolved, or mix it in a vessel and syringe it equally over the surface of the water. As the weed will doubtless appear again, it will be necessary to repeat the application at intervals of six weeks. The water should be drained off and the lake cleaned out every two or three years.

POT-BOUND PLANT (*T. H. P.*).—The instructions to which you refer are quite correct. A plant which has been growing in a pot for a long period becomes what is termed "pot-bound," the pot being filled with a dense mass of fibrous roots. While in the pot it can be kept watered and moist, for the water given cannot run away without soaking through the ball. But if that plant is placed in a border and the soil about it is left in a looser condition than the ball, then water is very likely to soak into the loose soil without wetting the ball. The rim of clay mentioned in the note is to keep water on the ball, so that it will slowly sink in, acting in the same way as the rim of a pot. We are interested to learn of your success in the use of leaf-mould for your Camellia and Vines.

GARDEN PATHS (*H.*).—The cheapest form of garden path is gravel, and if of a good binding character, *i.e.*, containing a fair proportion of marl, will bind together with watering and rolling almost like cement. Burnt lias clay, or ballast as it is called in some districts, is good also, but does not bind like the above unless mixed with cement. Frequently good paths are made with ballast and lime, though it is necessary that the lime be thoroughly slacked and mixed before putting down, otherwise it will blow. A good path is also made of cement concrete, first putting in rough material, clinkers, broken bricks and stones to a depth of 6 inches, mingled with cement in the proportion of one to six, and finally giving a 3-inch surface dressing of finer material gauged up at three to one. This, with a sprinkling of red ballast finely screened, would make a perfect path, free of weeds, provided that it be also well drained. Brick rubble alone would not bind, and tarred paths we do not recommend.

EXHIBITING CHRYSANTHEMUMS (*Chitree*).—The wording of the schedule in the class to which you refer is particularly vague, and we are not surprised to find that the members of the committee are in doubt concerning it. Assuming that you have given us an exact copy of the wording, an exhibitor would be able to show an entire plant cut from near the ground-level, provided that plant arose from a single stem. In the Chrysanthemum the "stem" would be the main growth; modifications of it would be "branch" or "spray." In the outdoor or border Chrysanthemum a "stem" may support many branches; hence an exhibitor would be within the strict rendering of the schedule in showing an entire plant as described above. Doubtless this kind of thing was never intended by the committee; but if that body does not know what interpretation is right in the circumstances, what of the exhibitor? From the garden point of view the outdoor Chrysanthemum is a decorative subject, one to be shown naturally as grown, and not as solitary flower-heads, as is usual with the large-flowered varieties. Under the circumstances, we should exhibit an entire plant the produce of a single stem growth, since upon the wording of the schedule there is no limit to the number of sprays or flowers such a stem might carry.

VARIOUS QUERIES (*O. S. B.*).—There is no sign of any disease on the Ferns sent, but the fronds have been eaten by an insect. At the same time, all the injuries are old ones, and the authors of the mischief may be no longer present. We suspect that the trouble is caused by weevils, which carry on their work of destruction under cover of the darkness and hide throughout the day. An investigation by the light of a hull's-eye lantern might reveal some of the enemies, though they drop to the ground and hide very quickly, while, as above stated, as all the wounds are old, they may be no longer there. Caterpillars of some of the smaller moths may be answerable for the damage, in which case Heligbora powder might destroy them; but for the weevils the only cure is to catch them, a difficult matter with such low-growing plants as Ferns, as the insects drop in the ground directly they are disturbed. We cannot understand cuttings of Carnations taken from good varieties producing single flowers, and should think a mistake must have been made somewhere. It may be a case of reversion, or probably an error in cultivation may have had something to do with it, but it is very doubtful. *Spiræa arifolia*, or discolor, which is now considered to be the more correct name, needs practically no pruning, although an occasional thinning of weak and exhausted shoots will be beneficial.

THE GARDEN.

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EDITORIAL NOTICES.

Every description of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Hints on Planting Roses.—The National Rose Society have just published a new edition of their little booklet, "Hints on Planting Roses." This has been arranged by a committee of the society, and in the new edition the lists of varieties have been brought thoroughly up to date. Copies can be obtained by non-members from Mr. E. Mawley, Rosebank, Berkhamsted, post free 7d.

Potentilla Gibson's Scarlet.—This glorious Cinquefoil, while not reserving to October or November the best of its brilliant flowering, still furnishes those months with a touch of colouring quite unique. The leafy sprays and gorgeous flowers, too, come from a well-groomed leaf-tuft, which as a setting alone is admirable in the extreme. Of perfect hardihood and free growth, it is worthy of encouragement.

A Dwarf Michaelmas Daisy.—*Aster ptarmicoides* minor compacta is a white-flowered, small and compact-growing form of a well-known plant—a perfect pigmy in its way, if, indeed, a pigmy is to be regarded as perfect. We speak, however, of miniatures in the same sense; hence we presume the application of the term is not here inapt. As to the plant, it is little more than eight inches in height, a quite good front-row subject for the border, or, better still, perhaps, for particular places in the rock garden.

Apples with Numerous Seeds.—As a rule, the number of seeds or pips in an Apple does not exceed ten, but this year quite a lot of fruits have contained as many as sixteen or even more. Mr. F. J. Chittenden, Director of the Royal Horticultural Society's Laboratory at Wisley, in investigating the cause of some Apples not being fertile when pollinated with their own pollen, has found that this abnormal number of seeds is particularly prevalent in the varieties *Frogmore Prolific* and *Duchess' Favourite*. It would be interesting to know if any of our readers have noticed it in other varieties.

Dangers of Plant-collecting.—The dangers that beset those who undertake the collecting of new and beautiful plants from such remote countries as Northern and Western China and Thibet were brought vividly before the notice of the members of the Horticultural Club on Tuesday of last week. In his lecture, which was well illustrated by lantern slides, Mr. Kingdon Ward, who has been plant-collecting in the countries named, and who returns again in January, made it quite clear that the hardships and perils that beset the collector in those wild and unexplored regions are very real indeed. Tropical forests and Arctic mountains, to say nothing of war-loving bandits, are only a few of the difficulties that have to be overcome. When enjoying the beauties of such plants as *Meconopsis integrifolia*, *Primula bulleyana*,

Buddleia variabilis and the hosts of others that have been sent home from the countries named during recent years, we shall do well to remember those men who have carried their lives in their hands to enable us to grow these plants in our gardens.

The Washington Thorn.—Foremost among berried trees or shrubs for winter effect should be included the Washington Thorn, known botanically as *Cratægus cordata*. The shiny leaves still remain green upon the tree, while the coral red fruits hang till long after Christmas. Moreover, this tree is most attractive in its flowering season—that is in May and June. The foliage much resembles that of a Poplar, hence it is sometimes met with under the name of *Cratægus populifolia*.

Thousands of *Lilium longiflorum*.—In **THE GARDEN** for September 21, page 477, a writer referred to the desirable qualities of this Lily and the various uses to which it may be put. Not a word too much can possibly be said in its favour, and an idea of the demand for it, as well as the steps taken to meet that demand, is shown in the fact that more than four hundred thousand bulbs of *Lilium longiflorum*, represented by three or four varieties, were disposed of in a single day at one of the London auction rooms. To such an extent does the retarding process now prevail that it is more than probable that the greater number were purchased to be subjected to this treatment. By this means the silvery trumpets of *L. longiflorum* may be had all the year round.

Experiments with the Burning Bush.—Sir Edward Thorpe, who has been conducting extensive experiments with a view to ascertaining why flowers of *Dictamnus Fraxinella*, or the Burning Bush, should be surrounded by a luminous flash when a lighted match is applied to them, writes at length on the results of his trials in last week's issue of *Country Life*. These he summarises as follows: "I believe the true explanation of the phenomenon of the 'Burning Bush' is as follows: If the flower-stalks, bracts and sepals of *Dictamnus Fraxinella* are examined, however superficially, at the time of inflorescence it will be seen that they are thickly covered with fine glandular hairs, many of which have their base in small protuberant ovoid glands, or pustules, of a dark red colour in the red-flowering species. These glands are more or less filled with an essential oil containing the strongly odiferous principle characteristic of the flower. . . . The hairs are really ducts, and so exceedingly brittle as to be readily broken by the passage over them even of small insects, when the essential oil is immediately forced out through the opening. On bringing a burning match in contact with the stem these fine hairs take fire, the essential oil is ejected, and the flame enlarged in size and rendered more luminous by the combustion of its constituents."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Beautiful Yet Simple Garden Effect.—In a small villa garden in the Bournemouth district I recently saw a number of plants of *Fatsia japonica* about four feet six inches high. One or two plants of climbing *Nasturtiums* had been trained to the stems, and eventually rambled among the leaves of the *Fatsia* plants. The light foliage of the *Nasturtiums* and the red, orange and yellow flowers thinly disposed among the large leaves of the supporting plants looked really unique and charming, and the *Fatsias* were not damaged in the least. It is surprising how uncommon features, such as the one referred to, attract the eye and add to the beauty of a garden.—G. G.

Two Good Autumn-flowering Roses.—Some of the most-prized Rose blooms I have had recently are from Edward Mawley and Florence Haswell Veitch, the former sent out in 1911 by Messrs. McGredy, and the latter in the same year by Messrs. W. Paul and Son. Blooms from the former were of exceptional size and solidity, the petals very massive, the colour intense and the perfume most agreeable. One bloom I cut lasted quite fresh for a week, and was admired by all who saw it. Blooms of the latter have not the size of the former in breadth of petal, but the petals are especially thick and well placed, making a superb flower of exquisite fragrance. The colour is even more remarkable than in the case of Edward Mawley, being more deeply shaded with black. I would strongly recommend both for a September display.—E. MOLYNEUX, *Swanmore*.

Autumn Effects at Wisley.—Visitors to the Royal Horticultural Society's Garden at Wisley should see a bed of many of the latest plants from Western China. This is to be found in the lower part of the garden, where *Gunneras* and *Bamboos* combine so well. The bed is occupied by many very interesting plants and shrubs, conspicuous therein being a wonderful form of *Berberis Wilsonae*. The specimens of the type recently exhibited in the Royal Horticultural Society's Hall were a mass of soft coral-coloured berries, but the plant at Wisley bears brilliant vermilion berries. Noticeable in the same bed are two specimens of *Lonicera nitida*, with most graceful line foliage, and which earlier in the season, I am informed, produce a pretty pink blossom. The autumn tints in the Wisley garden have been very lovely, but conspicuous among the trees and shrubs has been a glorious *Liquidambar*, which has attracted the attention of many visitors.—B. Weybridge.

A Pretty Autumn Combination.—The *Kniphofias* or *Tritomas*, which are also known as Red-hot Pokers, Torch Lilies and Flame Flowers, are bulbous plants of the showiest description, and should be grown wherever a bold and bright effect is desired during September and early in October. At a recent meeting of the Royal Horticultural Society, a *Kniphofia* was staged under the name of Lord Roberts by Messrs. Veitch of Chelsea, but it was considered to be synonymous with John Benary, and as such received an award of merit. It grows from 4 feet to 5 feet high, and the flowers are an intense orange scarlet. This plant has been in commerce for several years, and a pretty combination can be produced by planting this or some other red *Kniphofia* among *Artemisia lactiflora*, which produces terminal

panicles of milk white flowers, small individually, but very showy collectively. The *Yuccas*, with their branching spikes of white flowers, are also suitable associates for *K. John Benary*, while a group of the well-known *Pampas Grass* would also be improved with a few Red-hot Pokers intermixed.—S. T.

A Beautiful-leaved Shrub.—I have never seen *Cercidiphyllum japonicum* commence to colour so early as it did this year, nor have I ever seen it so lovely. I enclose some small tips of branches for you to see how beautiful it is with us. We have a dozen plants, some of them quite 5 feet in height and almost as much through. It would be most disappointing to find it was not quite hardy. The winter frost has not hurt it during the past three years, but it was rather badly nipped in April this year. The plants have made good growth this summer. I think it will prove to be quite as hardy as the Japanese Maples.—F. TUSTIN, *The Gardens, Abbotswood, Stow-on-the-Wold*.

The Carman Peach.—This Peach is proving to be a strong favourite for home gardens in the Central United States. It seems to thrive on warm, light soils, and to be much less desirable in colder and heavier localities. This probably accounts for the diversity of opinion expressed regarding the value of the variety. In those places where it succeeds, it is quite commonly regarded as being the most delicious of Peaches for home use. It is one of the North China type, now becoming very popular in the United States, and is quite distinct in many ways from the types of Peaches earlier known in this country and in Europe. It is a white-fleshed Peach, but colours a bright and beautiful red on the outside when properly grown. There is still a prejudice in many quarters in favour of yellow-fleshed Peaches, but those who are really acquainted with good fruit are generally of the opinion that white-fleshed sorts like Carman are really of superior flavour. This variety originated in Texas with Mr. J. W. Stuberrauch.—F. A. WAUGH, *Massachusetts, U.S.A.*

The Best Culinary Peas in 1912.—This has not been an ideal Pea season, and only a few varieties have done really well. The Pilot as a first early is always reliable here, and this season it was quite up to the average. Early Bountiful, although quite good, gave a lighter crop than usual, but the pods were decidedly larger than ever before. As a second early I again found Senator quite first-rate. Indeed, I never previously saw this valuable Pea give a larger yield, the crop being immense and the pods very large for this variety. This fine Pea ought to be much more widely grown than it seems to be. Carter's Daisy, as ever, was first-rate, an excellent Pea in every way, I was greatly pleased with the new dwarf Pea The Lincoln, raised by Messrs. T. H. Lincoln and Co. of Boston, Lincolnshire. Sown at the same time as Daisy, it came into use quite a week earlier, and gave a very heavy crop of well-flavoured Peas. The pods were packed with large seeds, averaging nine or ten to the pod. Dark green in colour, the haulm with me grew about two and a-half feet to three feet high. This must prove a valuable market Pea. Glory of Devon gave a fairly good crop, but not quite up to former years; Quite Content bore a good crop, but on my strong ground and with the wet, stormy weather it grew to a height of about ten feet, and the stakes only being about seven feet high, the haulm "knead" over and rather spoilt the return. Carter's Harvestman gave a good crop of excellent Peas. Royal Salute was again one of the very best main crop or late Peas. The Gladstone

was not up to the average for the first time in ten years.—C. BLAIR, *Preston House Gardens, Linnithgow*.

Roses in Holland.—Late Roses have not excelled those of last year, owing to the early frosts, and practically all plants growing in exposed situations are over for the year. In more sheltered positions the one that stands apart from all others is the old and lovely La France. Captain Christy looked promising before the cold became so intense, and with milder weather may find a late crop yet. Some varieties have been a little disappointing, and one especially so is Jonkheer J. L. Mock. It suffered badly from mildew after the first flowering, and has been unsightly ever since, in spite of attention. Can you give me the origin of a Rose named *Amabilis*? It is a Tea of a rather undefinable pink colour, of no special merit, and is, to its disadvantage, a weak grower. Many Roses ripened off very early, one in particular being Lyon. It has had no leaves for a month worth speaking of, also Augustine Guinoisseau. Zephyrine Drouhin finds more favour every year, and grows more and more indispensable, as also do Rose d'Evian and Johanna Sebus. General Macarthur has had a good season, having no equal in its special colour.—H. RABJOHN, *Twickel, Holland*. [There were two Roses named *Amabilis*, both Tea-scented. One was raised by Touvais in 1857 and the other by Robert. They were, presumably, chance seedlings, as no mention is made of their parentage, and, as you say, they are of no special merit.—ED.]

Saxifraga burseriana "tridentata."—The appearance by now of this ridiculous name in so many catalogues makes it necessary to point out the error. *S. burseriana* can do many things in the way of beauty; by no possible chance could it ever become in any way tridentate, or it would be *burseriana* no longer. The unlucky name arises from the fact that Herr Sundermann (I fancy) originally sent out under the very proper varietal name of *S. b. tridentata* that distinct and magnificent large-growing, large-flowered form of *S. burseriana* which alone prevails in the deep valleys of the Southern or Tridentine Dolomites, and from which major, Gloria and magna have each in time emerged. Tridentine being an adjective better known to ecclesiastical students of the Tridentine Council, or Council of Trent, than to most gardeners, it was not unnatural that laymen should fail to recognise the varietal name as meaning simply "belonging to the district of Trent," and, having received a name that had no sense in their minds, proceeded to distribute the great *burseriana* form under a new name that has no sense in anybody's. *S. b. tridentata* is merely the prevailing form of the Trentino, or County of Trent, or Tridentine Alps; and, as by far (with its sub-varieties) the finest form known of the species and the richest in growth and flower, should also be the prevailing form in all our gardens. I will only add that in the Tridentine valleys I have never seen yet any variations from this ample and magnified form, so different from the compact little *burserianas* of the Northern ranges and of higher altitudes. For, to the confusion of those who look on *S. burseriana* as a high alpine, or have seen it shrinking into tight masses on the crests of the Karawanken, one (at least) of its most brilliant and characteristic Tridentine stations is barely seven hundred feet above the level of the Adriatic, full in the vineland that makes the valley of the Adige such a scented Paradise in June.—REGINALD FARRER.

The Century Plant at Kew.—An illustration of this interesting plant in an earlier stage of its development appeared in *THE GARDEN* for May 25, and a comparison with this specimen as it appeared then and as it appears to-day is not without interest. At the earlier date the flowering spike resembled a gigantic Asparagus shoot, and the huge rosette of foliage was thick, succulent and rigid. To-day the immense rosette of foliage is but a ghost of its former self. The bold step that this plant has taken in producing flowers and seed is a final one. The whole energy of the plant is centred on its reproduction, marking the close of the history of this stately specimen. The leaves, now limp and drooping, have expended their latent store of nourishment on the production of an immense inflorescence bearing flowers and seed, and the life's work of the plant is nearing completion. The specimen under notice is that of *Agave atrovirens*, a native of Mexico. The branching inflorescence is about twenty-five feet in height, and the age of the plant is probably about seventy years, although, like other Agaves, it is known as the Century Plant from the fallacious supposition that it flowers once in a hundred years.

Exhibits from School Gardens.—In "Notes of the Week," issue November 2, the reference to exhibits from school gardens is very timely. Such exhibits have been staged at a number of shows lately. At a recent exhibition near Poole, Dorset, there was a very fine lot of vegetables staged which had been grown by a number of boys in the neighbourhood. These exhibits were very highly commended by the judges. Some years ago I gave practical lessons to about forty schoolboys in the Master's garden, and it was astonishing how well they succeeded in growing good crops. Readers may realise it to some extent when I say that His Majesty's Inspector of Schools recommended that the highest Government grant be given to horticulture at that school. If societies were to provide classes for children, such as the Bournemouth one does, great progress would be made by the children in the work of horticulture.—G. G.

FORTHCOMING EVENTS.

November 18.—National Chrysanthemum Society's Executive Committee Meeting.

November 19.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster. Lecture by Dr. Hamilton, F.R.G.S., on "Some Gardens In and Around Bournemouth." Norwich Chrysanthemum Show (three days).

November 20.—National Chrysanthemum Society's Exhibition and Conference at Essex Hall. Newcastle Chrysanthemum Show (two days). North of England Horticultural Society's Meeting at Hull (two days).

November 21.—Norfolk and Norwich Show (three days). Aylesbury Chrysanthemum Show.

November 22.—Chrysanthemum Shows at Aberdeen (two days), Dunfermline (two days); and East of Fife Chrysanthemum Society's Show (two days).

THE FRUIT GARDEN.

HOW TO COMBAT AMERICAN GOOSEBERRY MILDEW.

SO rapid has been the spread of this very virulent disease among the plantations of Gooseberry-growers, private and commercial, during the last two years that it is greatly to be feared there are few who are unacquainted with it. It may be helpful to some if in this article possible methods of attacking the disease and holding it

summer stage, violently infectious by reason of the multiplicity of spores produced, but fairly easily attacked by spraying with fungicides. It is also pretty well known that later the felt-like white mycelium on the shoots turns a brown colour, due to the formation of the winter spores. These do not spread infection at the immediate time; but they are a more serious trouble, since it is by means of these winter spores that the fungus is carried over the dormant season. They are provided with a hard, outer shell or skin, and at present no fungicide is to be found which will corrode this skin without at the same time doing damage to the bush.

The spores fall to the ground during the winter, and it is from these that fresh infection is set up in the spring, when the wood is young and tender and susceptible to injury. It is because the winter spores fall off during the winter that the Board of Agriculture insist on the pruning of affected bushes being completed early in the winter, and also that all prunings should be collected and burnt. If this work is thoroughly carried out now, there is reasonable hope that the disease can be checked considerably; but, of course, if it is left till after Christmas, there is but little hope. It is a good plan, where there is only a little disease, to have the affected shoots pruned off first, put in a pail, which is kept well dressed with paraffin, and at once taken and burnt without waiting to complete the ordinary pruning of the bushes. When this latter is done, it will be possible to see any pieces of disease which may have escaped the eye at the first operation, and these can then be served in a similar way.

When the disease first appeared in this country, the Inspectors of the Board of Agriculture recommended, if they did not order, that the tips of shoots affected with the disease in its summer stage should be removed at once. As this was generally the time when growth was most active, shoots so pruned often shot again at several buds, and the resulting growth was frequently affected with the mildew, so that the only result of this treatment was to increase the amount of infection on each bush. They do not now recommend this summer tipping; but it is always open to a grower to adopt it when he thinks there is little or no danger of the pruned shoots breaking into growth. If it is possible safely to remove the tips when only the summer stage is present, the amount of infection can

often be substantially reduced, while the winter pruning work is also sensibly lessened.

Another course of action to be taken in combating the mildew is by means of spraying, and this can be done in two ways—by strong winter washing with copper sulphate, 6lb. to 100 gallons of water, when the bushes are dormant, or by more diluted summer sprays when growth is active. For this latter there are several mixtures which can be used: Liver of sulphur, half an ounce to 1 gallon of water; Bordeaux mixture, preferably in the form of paste, 1lb. to 10 gallons of water; and,



THE CENTURY PLANT (*AGAVE ATROVIRENS*) FLOWERING AT KEW.

in check are outlined. There is grave reason for believing that this is, unfortunately, all that can be accomplished, and that it is not possible to stamp out the disease, but only to check its ravages and keep it somewhat within bounds.

It is not necessary to give a long, detailed description of the fungus, or to capitulate at length the various changes it undergoes in a season. Most growers know and can recognise the white, felt-like mycelium which attacks the growing tips of the shoots and the under side of the leaves on such tips during May and June. This is the

lastly, the new lime-sulphur. This last spray must be used with great caution, as it is very liable to damage the trees, completely defoliating them in some cases.

Professor Salmon of Wye College is responsible for this new treatment, and he stated a few days ago that, as far as he knew at present, it must be considered unsafe to spray Berry's Kent and Yellow Rough with lime-sulphur, that at the standard summer strength (1:01) Warrington and Whinham's were quite unhurt, while Lancashire Lad could be safely sprayed with half summer strength (1:005). As he has found trees thoroughly sprayed with this mixture

ROCK AND WATER GARDEN.

A GRECIAN WOODRUFF.

(*ASPERULA SUBEROSA*.)

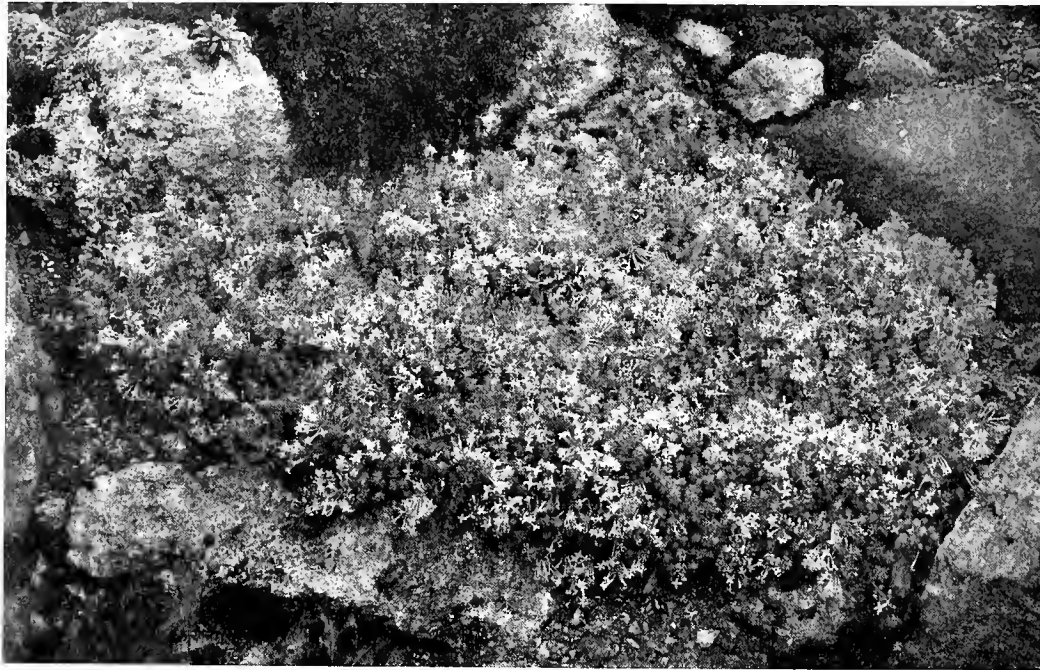
THIS beautiful little Grecian plant is quite one of the most charming plants to be seen in the rock garden during the months of May and June. It is at its best at this period, although flowers are produced throughout the later summer months as well. Grown singly, the plants present the appearance of hoary, woolly tufts surmounted by numerous pretty

rain. The glass should be placed in position in early winter, and kept on till about the end of March. Both make charming plants for growing in pans for the alpine-house. They are easily increased by means of cuttings in summer, using very sandy soil and placing the pots in a close frame, or by division in the early spring. W. I.

ROCK GARDENS IN THE MAKING.

(Continued from page 564.)

Artificial Rocks.—While having not the least sympathy with, and no desire to encourage, the use of any combination of materials which might be grouped under this head, it has to be admitted that occasionally amateurs get a fair amount, both of pleasure and success, from the use of them. In past days a not infrequent thing in a garden—nursery or private—was the "wilderness"—my grandfather had one such—while variations or modifications of it were known as "grottoes," which, with their massed arrangement of shells, were more interesting to the conchologist than to the gardener; and that worst of all types, because of a hideousness and inutility better imagined than described, which one may not inaptly refer to as "crockeries," by reason of their make-up and for lack of a more descriptive term. Happily, however, these things savour of the past, the only remaining relic our gardens contain of such atrocities being the clinkered burr of the brickfields, exposed to view unblushingly in all its crudity and nakedness, or veiled by a curtain of cement, as though the very sight of these incongruous piles was intolerable to the builder himself. It is, we have been told, an attempt to imitate Nature; but we have yet to be told that the attempt was succeeded by success.



THE GRECIAN WOODRUFF (*ASPERULA SUBEROSA*) IN THE ROCK GARDEN.

quite immune to the disease, while those unsprayed on each side were very badly affected, it is evident that there is some ground for hope that lime-sulphur may be extremely useful in combating the mildew, particularly if the scientists can overcome the liability to damage certain varieties.

There is yet another method which is being tried, that is, the application of finely-ground sulphate of iron to the ground around the bushes to destroy the winter spores which may fall, or, if this is not possible, to attack the minute growths when they germinate in the spring. Two applications should be given, one after pruning is finished, before the ground is dug, and another in the spring, before the first hoeing takes place. About one and a-half ounces to the square yard should be sufficient at each application if the crystals are very finely ground and the distribution is thoroughly and evenly carried out. It is only necessary to spread this as far as the boughs reach, and not all over the ground.

By a judicious and careful use of any or all of these various methods it is possible to keep the nasty disease within bounds, though none of them at present can be said to be capable of entirely stamping it out.

Brentwood, Essex.

F. HAMMOND.

pink flowers. But in time the tufts grow together and form a hoary carpet, as seen in the illustration, covered with flowers, a very attractive plant worthy of a place in the most select garden. *A. suberosa* is one of the choicest members of this family, of which perhaps the best known is the Woodruff (*A. odorata*), a great favourite in many gardens for planting in shrubberies or Fern borders, where it can run about without restraint. Another choice little species is the Pyrenean *A. hirta*, which also makes a carpet. It is rather taller than the Grecian plant, with paler pink flowers produced during the same period. Our native Squinancy-wort (*A. cynanchica*), which is found on the chalky downs, is also worth a place, for it has a neat, prostrate habit, with numerous pale pink flowers. Of the annual members of this genus, the best is *A. azurea* from Syria, with blue flowers on branching stems about one foot in height.

The cultivation of *A. suberosa* and *A. hirta* presents no difficulty. They prefer a warm, sunny position and to be planted in very gritty, well-drained soil. A ledge well up to the level of the eye is the best place, for then it can be seen to advantage. For *A. suberosa*, which, owing to its woolly foliage, suffers somewhat from damp in winter, it is necessary to have a piece of glass raised just above the plant to throw off the

The most I can say in its favour is that it appeared ingenious. The least I can say against it is that it has ever proved a delusion and a snare.

The Least Bad.—If my choice laid between these two, I should unhesitatingly declare in favour of the ungarnished, uncemented article, for no other reason than that all its shortcomings are on view, hence do not mislead the gardener. Moreover, crack and cranny and crevice—assets of inconceivable value even in the best-arranged rock gardens—are all retained and available for treatment. In the cemented, made-up form this is not usually so; hence one of the greatest sources of decorative planting—that which above all others not merely embellishes but effaces rock—is dried up. In all probability this make-believe kind of rock gardening has had its day, and in its stead is springing into being a type far more beautiful and valuable—particularly so from the utilitarian standpoint—than such incongruities could ever be. Moreover, and so far as I have observed, these great artificial erections perform no function of which the natural rock is not capable, nor are they to be recommended from an economical point of view. On the other hand, I am tolerating for the moment the untold crudities of the uncemented clinkered burr for the sake of those who

consider themselves surpassingly rich with a few barrowfuls of such things, and because of the difficulty of obtaining stone in small quantities in town or suburban districts. These, too, are tolerated for their pleasure-affording attributes by that rather large group of amateurs who to-day do their rock gardening in the space of a few feet. To such as these they are invaluable, and they have their own ideas of making them a success.

Where Failures Occur in the use of such things is more frequently the outcome of the cramped pocket arrangement—it too often constitutes a sort of water-tight compartment—of a few inches deep, out of touch with everything save for the small parcel of soil the pocket itself contains. For the amateur is not content to use cement to hold the erection together; he takes considerable pains to ensure that the roots of the plants do not escape from their allotted holding. All this is, of course, wrong, immeasurably so, and when we remember the liberty-affording crevices of natural rock it is a matter for surprise that the plants exist at all. Some plants, however, are capable of an existence even on the driest wall-top, and these and their sturdiest kinsmen are those best calculated to endure.

How Alpine Plants Root.—This phase of the subject is so intimately interwoven with the question of suitable and unsuitable rocks that a few remarks *à propos* at this juncture will not be out of place. Reference has already been made as to the value of crack and cranny and crevice, and if we imitate Nature at all, no matter how feebly, we must do so in this. Not a few alpine plants send their root-fibres down to almost incredible depths in their native habitats, the crevice itself being a larder filled with the choicest foods. Thus a splendid tuft may appear to exist on the merest ledge of rock, though its root-fibres meanwhile may be in a deep crevice yards away. In the great rock garden at Friar Park this phase of the subject has been fully appreciated, and whether the rocks be of huge proportions or of quite ordinary size, the packing of crevices with material of suitable description ever receives studious care. Hence, as a result, is there so much of that "art which doth mend Nature." In like manner, just as the Friar Park example endeavours to imitate Nature, so might the builder of even the smallest rock garden do in this particular, viz., the forming of crevice or cranny for the reception of certain classes of plants. Quite a large number of plants do well enough and grow into free-flowering masses when planted in the ordinary way, though there are others—and they constitute a by no means inconsiderable number—that are best otherwise—best because of the improved possibilities for their natural display, best as an aid to their longevity and comparative immunity from slugs, and not least because Nature apparently intended for her richest jewels a setting apart from the rest.

E. H. JENKINS.

(To be continued)

IRIS KÄMPFERI.
(*SYN. I. LÆVIGATA.*)

THE illustration that accompanies these notes will afford some idea of one of the many beauties that are to be seen at the Wisley Gardens of the Royal Horticultural Society. This Iris thrives remarkably well there, and the success achieved indicates in some degree its requirements. To start with the soil, this is not in any sense of a heavy or retentive character; hence it is quite at home near to, and frequently in direct touch with, the water, but slightly raised in most instances above the average level of the pools. This fact should not mislead intending planters into thinking that the same treatment will suit in every instance. If planted, say, in a heavy loam with a tendency to clay, the surrounding soil being possibly to some extent water-logged, it will be much safer to keep the plants somewhat higher out of or above the water, and do what is most essential in our opinion—provide for drainage prior to planting, so that the water passes away from the roots. With this Iris, as with many other plants, it is a question of soil and water in combination more than anything else. A cold, stagnant soil is most harmful. This Iris cannot tolerate such a state. Warmth is most essential; this it gets at Wisley in the

NEW USES FOR LIME IN THE GARDEN.

MODERN science has been busy with liming experiments during recent years, and has now shown that lime has functions to perform which are out of the run of those usually and formerly associated with it. Nitrification, for example, has been found to require an alkaline condition, and it is probably largely due to lime that this has been brought about when sulphate of ammonia has rendered the ground absolutely poisonous to plants through acidity. Another and more interesting development in the use of lime of late years has been in the direction of finding out what plants are specially benefited by its use, or even injured, for the latter has been found to be the case with several plants, strange though it may sound. A notable instance of this has long been known in Spurrey, which increases where the lime goes out of the ground, and the same antipathy has been found by experiment with Sorrel, Serradella and blue Lupine, again, have been found to be injured by liming, in the case of Lupine after each of three successive experiments. Gladioli, also, and Red-top have been injuriously



IRIS KÄMPFERI AND WATER LILIES IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS AT WISLEY.

sunny positions the plants occupy. So it is at Clandon Park—the Earl of Onslow's—where they thrive splendidly by the margins of the lake, but in sunny, warm situations. In Japan these Irises are grown on low-lying ground, where, when needed in the hot weather of that part of Japan, they can be irrigated as occasion may arise; but this is far different from growing them in this country only slightly above the water-level. It is a great pity that this lovely Iris is not grown more than it is. It is a sun-loving plant, and one that delights in an abundance of water during growth, but the soil should be sweet and porous, all the same. ANGLO-JAP.

affected. More useful, perhaps, are the experiments on Grasses which have been made in America, which indicate that the needs of these plants are not all similar, even the commoner sorts showing a difference, though the results are only the fruits of two years' experience. Timothy, Awlless Brome Grass, Smooth Meadow Grass and others may, it seems, be benefited by liming, and in various degrees; but Sweet Vernal, Soft Grass and an American variety show less benefit or none at all. Indications, in fact, suggest the probability that individual Grasses show just as great an inclination or aversion to liming as do those of leguminous

plants, Melon and other families which have been experimented on.

Water Melons, for example, showed distinct injury from liming, the second year more than the first; while, on the other hand, the Musk Melon would only flourish where the lime was. In the same way garden vegetables have varying capacities for appreciating lime, and none of those experimented with, which included most of the common vegetables, as well as Dandelions, showed a dislike to liming, though the benefit was not at first apparent in one or two cases. A multitude of good effects on plant-life and soil fertility are now, in fact, found to be due to lime, which might almost be termed the universal solvent of the soil.

GERVAISE TURNBULL.

THE GREENHOUSE.

A NEW PERPETUAL-FLOWERING CARNATION

ROSETTE is the name given to a new and beautiful Perpetual-flowering Carnation with rosy cerise flowers. The newcomer is of good constitution and blooms freely. The flowers are illustrated as grown, having been photographed from a plant in a $1\frac{1}{2}$ -inch pot shown by Messrs. Stuart Low and Co., Bush Hill Park, Enfield, at a recent meeting of the Royal Horticultural Society. The flowers are refined and of perfect form, and, above all, the calyx is sound. Rosette is bound to become a general favourite as soon as its many virtues are known.

STOCKS FOR THE GREENHOUSE.

Stocks grown in pots for flowering in the greenhouse in springtime are more appreciated every year. The experienced cultivators know which plants to retain and which to discard when aiming at the production of a majority of double flowers on strong stems. The inexperienced growers do not, and therefore they generally select the strongest plants possessing long, green leaves, and throw away, what appears to them, to be the poorest plants. Those specimens most likely to bear double flowers possess rather short, rounded leaves of a blue-green colour, and are not as gross-growing as the others. They are quite as strong, really, as the stems are thicker and shorter-jointed, the central spike being, as a rule, a strong one and the side branches short, bearing from three to five or seven double flowers. Well-grown plants of the intermediate section bearing single flowers are lovely, fragrant and effective at a season when such flowers are scarce.

The plants should be placed under glass before the end of November. They are best when grown under cool conditions while very young, as any attempt at forcing them only weakens the plants. When the really cold weather, with occasional

frosts, comes, the plants are best placed in a greenhouse from which damp and frost can be excluded. Keep them near the glass on a stage or shelf away from the hot-water pipes. Give water carefully, never allowing the soil and roots to get dry nor keeping it and the roots in a saturated condition. Feeding should not commence until early in February.

G. G.

HOW TO PRUNE PLUMBAGOES.

The Plumbago is one of the best of climbers for an amateur to train under the glass roof of his greenhouse or conservatory. Directly the flowers have faded and many basal leaves have also



CARNATION ROSETTE. A REFINED PERPETUAL-FLOWERING VARIETY.

shrivelled on the current year's shoots, some pruning must be done. It is a mistake to prune hard back at this time. Leave about nine inches of stem, and then prune to within 1 inch of the base about Christmas-time or early in January. So treated a check is not given to the plant, and the basal buds swell up nicely.

When the first pruning is done, lessen the quantity of water at the roots considerably, and from the middle of December to the first week in February cease watering altogether. At the latter period give a thorough soaking after clearing away any loose surface-soil and then apply a top-dressing of lumpy loam, leaf-soil, rotted manure and sand. SHAMROCK.

THE FLOWER GARDEN.

SOME GOOD CHEAP TULIPS.

READERS may remember an excellent picture of the double Tulip Murillo in the September Bulb Number of THE GARDEN, and that the writer of the note which was published with it seemed very surprised—it evidently had been given him along with some others—to find for how small a sum such a treasure could be bought. He thereupon made an appeal to me to furnish a list of some of the best varieties that may be purchased at a correspondingly low figure. I have no difficulty in responding to his invitation, for although the writer above mentioned almost seemed to think that it might be so, neither the beauty nor the utility of a Tulip can be gauged by its price. Undoubtedly in the early days of their introduction, or upon their discovery by the flower-loving public, varieties such as Clara Butt and Le Rêve (yclept of old, Hobbema) command fairly high prices for some little time, yet their power of increase is such that before very long they get the better of the demand, and then sadly, but necessarily, the dealer marks them down. The few "old stagers" that always remain expensive are those which increase but slowly, such as Chameleon, Zomerschoon, Columbus (French Crown), Ada and Louis XIV.

As the picture of Murillo showed it growing in a garden, I imagine what is wanted from me is a list of cheap varieties that are especially suited for borders or for bedding. For convenience of reference it will be well to take them in the order in which they are usually placed in catalogues; and, furthermore, to carry out the intention of this note I have fixed a shilling a dozen as the limit beyond which I will not go, except in two or three instances, which will be duly noted.

Early Singles.—The varieties selected have longer stems than many, and, to my thinking, have a more taking appearance than the short, stiffer-looking ones. Couleur Cardinal.—I have seen this offered at 1s. per dozen this year, but generally it is about 1s. 6d.; however, so highly do

I think of it that I have not hesitated to include it; deep blood red, outer petals flushed rich plum. Duchess of Parma, orange and crimson, lovely under electric light; Dusart, rich red; Fred Moore, a darker form of the well-known Thomas Moore—goes so well as a dot plant among yellow and orange Polyanthus; Keizerskroon, bright red and yellow, a little "loud" unless carefully placed; Prince de Ligny, a particularly graceful yellow; Prince of Austria, tall red orange, a wonderful luster, and as it becomes more orange with age, almost may be said to give two displays. There are, and have been, great flowers and great fruits. This, surely, is one of the great flowers. Scarlet Mammoth, really

a midseason bloom, a square-shaped flower borne on a medium-lengthed stem and of such intense brightness (red) that one wants blue spectacles to look at a big bed of it in full sunlight; Stanley, a delightful carmine rose; Van Gooyen, a tall Cottage Maid, but oh! such foliage—powdered apple green is a hint of what it is like; Vermilion Brilliant, an early brilliant and very reliable red; White Hawk—sometimes I like White Pottebakker rather better, sometimes White Hawk. This latter is a trite later to bloom, and has somewhat crinkled petals.

Early Doubles.—Murrillo: Under the circumstances it goes without saying this must be included. The accompanying illustration shows a large bed of 500 bulbs as it grew this last April in Mr. Carruthers' garden at Eden Grove, Carlisle. I always say, "Give me a big enough mass of almost any one flower and the effect is good." Very likely this gentleman has filled up this bed already for next year's show; but if not, and if he should want a real bright spot in the spring,

time comes round. Bouton d'Or, a deep yellow that becomes fat and well-looking with age; Didieri alba, a pure white of the lean kind; Fairy Queen, an æsthetic lady in a gown of slaty lavender and canary; gesneriana major (or spathulata), a magnificent crimson with such a base of dark blue; Golden Crown, a dissolving view effect, first yellow, then red; Inglescombe Pink, a pretty delicate lavender pink; Isabella, buff edged, and finally flushed all over rose, a dwarf grower; mauriana, scarlet, with a pure yellow base, late and lasting; Orange Beauty, a massive orange red, also on the late side; Parisian Yellow, a good reliable yellow; Picotee, a graceful plant, white, edged rose; and strangulata, a lovely primrose, rather dwarf (see THE GARDEN for October 19).

Darwins.—Prices rule higher in this section, so I have had to put another sixpence on to my limit of a shilling. The twelve varieties that I have selected are a good representative collection, but to get them I have had to stretch my second limit in the case of Mr. Farncombe Sanders (about 2s. 6d.),

THE ROSE GARDEN.

NOTES ON NEWER ROSES. HYBRID TEAS FOR EXHIBITION.

(Continued from page 568.)

Leslie Holland (Hugh Dickson, 1911).—I do not think the season has suited this Rose. That it is one of the finest Hybrid Teas of its colour we have, anyone who has seen the numerous flowers of it staged throughout the last three or four years by the raisers cannot doubt. It is a good grower, but not vigorous like Hugh Dickson, and should on that account make an excellent Rose for bedding. It is very free-flowering throughout the season, and in this respect will supply a long-felt want, as there is not a really good crimson bedding Rose. Hugh Dickson's habit of sending up long shoots 6 feet or 7 feet high preventing us from calling it an ideal bedding Rose. I well remember the box of twelve staged at the Luton Show, where it was awarded the gold medal, and



A BED OF TULIP MURILLO IN A CARLISLE GARDEN. IT IS A BEAUTIFUL DOUBLE-FLOWERED VARIETY THAT CAN BE BOUGHT CHEAPLY AND PLANTED NOW.

might I suggest a trial of the before-mentioned Scarlet Mammoth as a somersault contrast to the quiet tone of Murrillo. Two other good cheap doubles occur to me—Rubra maxima, a deep red; and Salvator Rosa, a reliable and pleasing semi-double rose and white.

Cottage Tulips.—If we ransack all the catalogues that come to hand, we will find a pretty wide choice of fine things. Most varieties increase quickly and, let the demand be ever so much greater than it is even at present, they will be able to keep pace with it, and we need not fear any huge increase in prices. By the aforesaid process I think I have been able to select what I feel sure all who know them will agree with me in calling a very nice dozen. Before I give the names let me implore the owner of every garden who has a border with a few unfilled spaces still going begging, and who has never grown either Cottage or Darwin Tulips, to give them a trial next spring. A few clumps with, say, six bulbs in each would not be a ruinous matter, and would be much appreciated when flowering

but it is such a distinct and glorious bit of colour that I could not omit it. The first time I ever got among the Darwins in Holland I well remember how this tall variety always stood out from all others in height and brilliance. Baronne de la Tonnaye, a good type of the rose-edged pale pink varieties; Clara Butt, the most popular of all, salmon pink, not so tall or large as many others; Dream, a pretty pinky mauve; Harry Veitch, deep blood red; King Harold, splendid maroon red; Loveliness, clear rose; Mme. Bosboom Toussaint, 156-4 in the Colour Chart, carmine; Margaret, blush pink; Mr. Farncombe Sanders, a grand rosy crimson; Pride of Haarlem, old rose colour, very large flower; White Queen, the nearest approach to a white among the Darwins; and Zanzibar, a most reliable deep maroon, very dark. Tulips are far more accommodating about being planted than Daffodils, and if they are bought at once and planted before the end of November, they are sure to give a good account of themselves.

JOSEPH JACOB.

I have seen it in even better form on other occasions, notably the nine that won first prize at the "National" for any new Rose. All exhibitors I expect have got it, but if they have not they should obtain it, as a good flower of it will attract attention to any box, be it a six, twelve or a twenty-four.

Lieutenant Chaire (Pernet-Ducher, 1910).—The parentage of this Rose does not read very temptingly, Etoile de France not being exactly one of this raiser's "great" Roses; but the Rose under notice has none of the faults of its parent, and with me has been quite a good Rose. I have had flowers of it very much like Hugh Dickson, except that the white line which nearly always appears down the centre of one or more of the outside petals of Hugh Dickson was absent. I believe the other parent was Liberty; in any event, the offspring seems to have missed the bad faults of both of its parents, as it is a better grower than Liberty and a freer flowerer and much better "opener" than Etoile de France. I have only

one plant of it, so cannot write definitely; but I think I can recommend it sufficiently to say, "Try it."

Mabel Drew (Alex. Dickson and Sons, 1911).—This firm's 1911 set I have already referred to. It contains one Tea and ten Hybrid Teas, and of the ten Hybrid Teas I think I should place Mabel Drew on top as the best exhibition Rose of the series. It won the gold medal at the Salisbury Show in 1910. It is difficult to find a fault in this Rose. It keeps its colour well—deep cream—holds its flowers erect, and they are of excellent shape and with fine smooth petals. It is sweetly scented and a good grower, and altogether a Rose that the raisers can justly be proud of. I have seen no mildew on any plants this year, although plants close by had it badly. Certainly one of the best of the new Roses. Strongly recommended.

Margaret (William Paul and Son, 1909).—I am very fond of this Rose. Its delicate colour and shape have always appealed to me since I first saw its blooms at a Royal Horticultural Society's Temple Show some four or five years ago. It is a Killarney-like flower, yet distinct from that variety. Growth and habit good without being vigorous. Free-flowering, and with me nearly exempt from mildew. A good-shaped flower is very telling in the front row, from which remark it will be gathered that there is not much weight about Margaret. She is of the "sweet seventeen" rather than the "fair, fat and forty" stage that appeals to so many.

Miss Cynthia Forde (Hugh Dickson, 1909).—Another Rose that is on the border-line between exhibition and garden. That it has possibilities in the first class is proved by the fact that a bloom of it shown by the raisers secured the silver medal at the last autumn show of the National Rose Society for the best Hybrid Tea in the show. It is a brilliant rose pink in colour, with distinct claims to be reckoned the best flower of its colour for the garden. Very free-flowering throughout the season, good habit of growth, nearly mildew-proof, if not quite, delicately perfumed, altogether one of the best Roses that Messrs. Hugh Dickson have given us. A pink Antoine Rivoire is, I see, a note I made of this Rose when first seen some five years ago in the raisers' nurseries, and that is not praising it too highly. As a bedder I am inclined to put it before Caroline Testout or Lady Ashton. Gold medal at the National Rose Society's autumn show, 1909.

Mrs. Arthur Munt (Alex. Dickson, 1909).—A Rose that I have expected to see more of. It had very bad luck in not obtaining a medal. It is a good reliable flower of ivory white tint, not quite so large as some of the giants, but a delightful Rose in shape and delicately Tea-scented. Nearly mildew-proof, and a good grower without being too vigorous.

Southampton. HERBERT E. MOLYNEUX.
(To be continued.)

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Begonia Emita (B. socotrana × B. Pearcei seedling).—A novelty and an acquisition at the same time. It is quite distinct from all other of the B. socotrana crosses, more particularly in colour, which is a great gain. The flowers are large, of pale tawny orange shade, the buds of a deeper shade.

Begonia Optima (B. socotrana × B. single orange scarlet).—This is of clear salmon pink colouring, of a somewhat looser habit of growth than the last. Both were raised and exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Carnation St. Nicholas.—One of the Perpetual-flowering class, a flower of large size and crimson-scarlet in colour. The variety is apparently of the American type, i.e., with more or less serrated petals, and is endowed with slight perfume. From Messrs. Stuart Low and Co., Enfield.

cushioned centre and short florets of the old type are replaced by a singularly small-cushioned centre and large strap-shaped white florets. These were sent by Messrs. Cragg, Harrison and Cragg, Heston, Middlesex.

Chrysanthemum Mr. Leonard Harrison.—A large single, the florets coloured a reddish crimson, with buff reverse. From Mr. L. F. Harrison, East Grinstead.

Nephrolepis exaltata Willmottæ.—Yet another addition to that remarkable class whose earlier plumose character appears now to be obscured in a moss-like density, a density, too, that has followed on in a sort of consistent graduated order from the beginning. The series constitutes quite a unique chapter in evolution, and should interest the plant physiologist exceedingly. Shown by Messrs. H. B. May and Sons, Edmonton.

Hoheria populnea.—A rare and beautiful New Zealand flowering shrub, having white Deutzia-like flowers in axillary and terminal clusters. The anthers and filaments also are white. The shining leaves are ovate-acuminate, crenately margined, dark, almost olive green, hard and coriaceous to the touch. Not quite hardy except in the warmer west and south-western counties. (See illustration.) From Mary Countess of Ilchester, Abbotshury Castle.



FLOWERING SPRAYS OF HOHERIA POPULNEA, A RARE NEW ZEALAND SHRUB.

NEW ORCHIDS.

The list of new Orchids to gain awards at the exhibition of autumn-blooming Orchids is an exceptionally long one, some of the novelties being uncommonly beautiful and of great value.

FIRST-CLASS CERTIFICATES.

Odontoglossum Aurora, shown by Messrs. J. Veitch and Sons, Chelsea; *Odontodia Bradshawia gattonensis*, from Sir J. Colman, Bart., Gatton Park; *Lælio-Cattleya Orion Othello*, shown by Messrs. Charlesworth and Co., Hayward's Heath; and *Vanda cerulea Lady Holford* and *Cattleya Peetersii Westonbirt* variety, from Lieutenant-Colonel Sir George Holford, K.C.V.O., Tetbury.

AWARDS OF MERIT.

Brasso-Cattleya Hyea and *Cattleya Oberon*, from E. R. Ashton, Esq., Broadlands, Camden

Park, Tunbridge Wells; *Odontoglossum eximium McBean's* variety, exhibited by Messrs. J. and A. McBean, Cooksbridge; *Cypripedium lathamianum* × *insigne Chautinii*, from J. G. Fowler, Esq., Glebelands, South Woodford; *Cattleya Rhoda the Jewel* and *C. Venus Princess*, from Messrs. Charlesworth and Co., Hayward's Heath; *Lælio-Cattleya Walter Gott*, shown by Messrs. Sander and Sons, St. Albans; and *Cypripedium Muriel*, *Cattleya Fabia Gloriosa*, *C. F. Sunset*, *Lælio-Cattleya Golden Fleece* and *Cattleya hardyana La Perle*. These five beautiful novelties were all sent by Lieutenant-Colonel Sir George Holford, K.C.V.O.

Chrysanthemum Queen Mary.—A huge spreading white flower of remarkable proportions. From Messrs. W. Wells and Co., Limited, Merstham.

Chrysanthemum Miss A. E. Roope.—A gloriously rich golden yellow of the Japanese incurved class. A variety of distinction and merit, and handsome withal.

Chrysanthemum Hector Menzies.—A very handsome single yellow-flowered variety of considerable attractiveness. These two were from Messrs. H. J. Jones, Limited, Lewisham.

Chrysanthemum Portia.—A large single-flowered variety of chestnut red colour, the florets having a yellow base.

Chrysanthemum Snow Queen.—A new type of the Anemone-flowered class, in which the huge

the foregoing were shown before the Royal Horticultural Society on November 5, when the awards were made.

GARDENING FOR BEGINNERS.

HOW TO REPOT CATTLEYS.

CATTLEYS, *Lælias*, *Brassavolas* and their numerous hybrids should be repotted when root-action begins, and the best time of all is when a fresh batch of roots are seen pushing from the base of the current year's growth or nearly-developed pseudo-bulb. In Fig. 1 is shown a plant turned out of its pot, and new roots can be seen at the bottom of the last-made growth. A careful watch is advised, so as to carry out the operation before the new roots grow too long; but an observant cultivator will soon be able to just anticipate their appearance and have his plants repotted so that they immediately enter the new compost. Annual disturbance must not be practised, so sufficient space ought to be left for at least two seasons' growth. The object of repotting an Orchid should be to provide additional root room; but this does not always mean that a larger receptacle is necessary. The contrary is occasionally the case, while a pot of the same dimensions is often used. To the novice or beginner this may at first sight appear paradoxical, but when it is explained that a number of the back pseudo-bulbs are useless and must be cut off, the practical idea will at once be grasped. Three or four behind each lead or growing point are ample, and there will be no need to disturb the front portion of the plant to any great extent. One reason in favour of Orchid-growing is that the vitality and flowering capacities of the plants can be re-

tained without their taking up any more stage room, unless the species or variety is worth increasing, when the old bulbs can be repotted, as shown in Fig. 2, to see if they will form a shoot from one of the dormant eyes. There is, however, one other reason for repotting, which occasionally happens in collections where the most skilled men are employed. This is when a plant becomes sick and nearly all its roots decay. The only method to adopt is to wash away all the old soil and dead roots, and place it in a pot just large enough to take the bulbs; but plenty of drainage is essential, while it must be kept firm by a neat, green stick, when, with constant attention, it generally recovers.

Potting Compost.—The most popular rooting medium, and one that will give good results, is as follows: *Osmunda* or *Ar* fibre, good fibrous peat and chopped sphagnum moss in equal parts,

with enough crushed crocks or silver sand to render the whole porous. As each year passes it becomes more difficult to secure peat of suitable quality, and where the best cannot be obtained, *Osmunda* fibre should be chosen instead. Ordinary flower-pots are recommended, which are filled one-fourth of their depth with drainage, over which is arranged a thin layer of sphagnum moss to preserve a free outlet for water. Teakwood baskets and pans with side holes are sometimes associated with Orchid culture; but these are quite out of date, and no successful grower selects them for *Cattleyas* and similar Orchids. When repotting, the

HOW TO PLANT AN APPLE TREE.

THE planting of a fruit tree seems a very easy matter indeed. Make a hole, put in the roots and cover them with soil. Many inexperienced cultivators think this is all that is necessary. The way in which the work is done, however, is the all-important thing. In the first place, the hole should be made quite 6 inches wider all round than the spread of the roots. It must not be made too deep, and the subsoil should be forked up also. If the soil is clayey, the roots of the tree should be nearer the general surface than in the case of a light soil, and be covered with the usual quantity of soil, which will come a little above the surface. This will tend to keep the roots drier and warmer in winter in the clayey loam. Work the soil well in among the roots, make it moderately firm, and duly stake the tree. B.

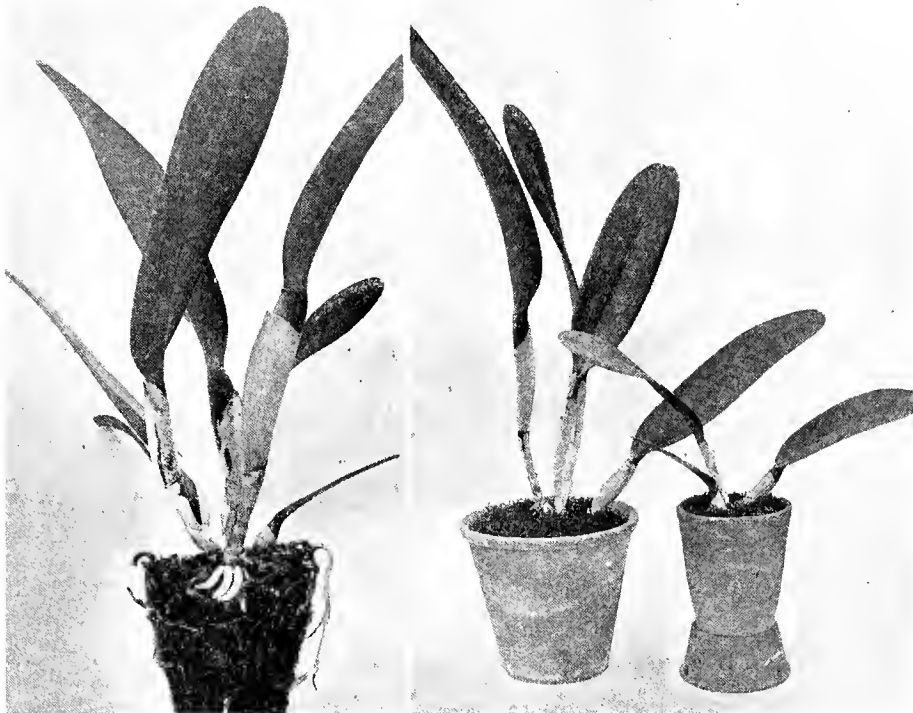
REPOTTING

LILIUMS.

THE *Liliums* will make moderate growth, even when the bulbs and their roots are retained in small pots, if ordinary care be taken in the application of water and in the cleanliness of the foliage. If, however, the plants are duly repotted, the results are, nearly always, very satisfactory. Of course, the best results are obtained when the bulbs are first potted low in the pots with a view to a future repotting. In all cases this is not done; but where it is not, repotting must be carried out. This work can be attended to now in cases where

the plants are so advanced that roots are beginning to grow from the stems just above the soil. The plants must be potted in a mixture of old fibrous loam, sweet leaf-soil, rotted manure and sand. The loam must be lumpy, but, of course, of convenient size for potting purposes. Press the compost down with the fingers, not with a potting-stick, and provide good drainage. Afterwards water with care, and be sure that the plants are not checked by being kept in too cold a temperature.

The Repotting of Old Bulbs.—Old bulbs that have rested and now show new growth must be repotted in rather small pots. Clear away very carefully the old soil, dead scales and roots, and then pot the bulbs low down in the clean pots. Leave the pots for a time in a cold frame just safe from frost. AVON.



1.—CATTLEYA PLANT READY TO BE DIVIDED AND REPOTTED. NOTE THE LITTLE WHITE ROOTS.

2.—THE SAME PLANT DIVIDED AND REPOTTED INTO TWO POTS OF DIFFERENT SIZES.

last-made pseudo-bulb should be as near the centre as possible, and so arranged that when the operation is completed, the surface of the soil will be on a level with the rim of the receptacle. Press the compost fairly firm and allow the growing point to rest on the top, for it is fatal to cover it to any depth; and when the loose particles are neatly clipped off with a pair of scissors or shears, we get an example similar to the one in the second illustration. A thorough watering is now given to wet the whole of the soil, and if the surroundings are kept moist by occasionally damping the stages and paths, no more will be required for a week or two. As growth advances and root-action increases, water may be applied more frequently till the bulbs are fully matured, when water is needed in less quantities; but the pseudo-bulbs must not be allowed to shrivel through lack of moisture. SENTINEL.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Herbaceous Borders.—When planting a new border it is advisable to stake out the positions where the principal subjects are to be placed, ranging them according to their height and allotting their space according to the habit of the plant. With the large-growing perennials the planting in clumps of three, triangularly, has much to recommend it, as one gets a bolder effect without undue overcrowding. Old clumps should be divided by placing two forks back to each other and pulling apart; this is much to be preferred to chopping with a spade. Select the outer portions, not too large, and plant firmly. Label the plants as the work proceeds, and leave the surface soil level and neat. Give the border a mulching of leaf-mould or spent Mushroom-bed manure.

Echeverias.—These in variety are excellent for edgings to the flower-beds in summer, and the plants must be protected from frost during the winter months. *E. metallica* is almost hardy, and we simply build this up with soil in rows against the wall of a greenhouse, commencing with the largest and sloping towards the top, finishing with the smallest offsets. *E. farinosa* and *E. secunda glauca* are much less hardy, and are best placed thickly in boxes of soil and stood in a cool but frost-proof house.

The Shrubberies.

Tree Pæonies.—The named varieties of these are beautiful objects when in flower, and comprise single and double flowering varieties of almost every shade from white to deepest crimson. When planting, choose a position so that the flowers are not caught by the early sun, as this, when the buds are opening and late spring frosts prevail, is apt to injure them. Enrich the soil with abundance of good farmyard manure, as, where the plants are put, there they ought to remain, for they resent frequent disturbance at the roots.

Japanese Maples.—Several of these, in addition to their charm when unfolding their delicate foliage, are grand in the autumn. When planting, choose well-drained ground and not too heavy in character. These shrubs, like the Pæonies, are apt to get touched with late frosts, so should be planted in a somewhat sheltered place. A variety named *Osaka-suki* turns a brilliant colour.

Berberis Thunbergii.—When planting shrubs, this subject should not be overlooked. Whether on the rock garden or in the shrubberies, it is one of the very earliest to denote the approach of autumn. It will thrive in practically any soil and any position, and a restricted root-run, though stunting growth, only seems to intensify its colouring.

Plants Under Glass.

Mosehosma riparium.—For cool greenhouse decoration at this season a batch of these plants are indispensable, the blush white flowers harmonising with almost any other subject, while the flowers are well suited for button-holes. A few plants, when flowering is over, should be reserved for a supply of cuttings.

Strobilanthes dyerianus.—This plant requires a warm greenhouse to grow it successfully. It is a striking foliage plant, very easily raised from cuttings, and, grown in small pots, is fine for groups or indoor decoration.

Bulbs.—Those placed out of doors under ashes or fibre must be examined occasionally, and those forward enough transferred to cold frames. Before bringing them into the greenhouse well wash the pots.

Cacti.—These will be much better if kept quite dry for a month or two and the structure or surroundings kept as dry as possible. Give a little air to the house on all favourable occasions.

Fruits Under Glass.

Peach Trees.—To maintain a fruitful tree, thin out the growth, doing away with the older wood and retaining as much of the young wood as possible, as it is on this growth that next year's crop will be formed. Lay in the wood as evenly and straightly as possible, and neatly tie it into position. Always endeavour to keep the base well furnished with young wood.

Ventilation.—While fruit trees are dormant, whether Vines, Peaches, Cherries, or other kinds,

they are greatly benefited by an abundance of ventilation, and when there are no other subjects in the same house to be studied, leave the ventilators open day and night, and have a slight circulation of heat in the pipes to prevent any injury from hard frosts.

The Hardy Fruit Garden.

Now that the leaves are all off, any work, such as pruning or planting, need not be delayed. If the positions are not ready for the trees, the latter should be obtained and heeled in, and, if the roots are well protected, they will take no harm. What type of fruit tree to purchase is often a question, but depends upon the position one has to fill in the garden. The pyramid or bush trained is the one usually most suited for small gardens, being very reasonable in price, and if maiden trees are bought, these soon grow into bushy specimens, are easily transplanted, and come into bearing at an early age. If one has a wall, a few cordons will give fine fruit, also if planted on an arch or pergola. The foregoing remarks apply especially to Apples.

The Kitchen Garden.

Celery.—If the weather promises to be frosty, lift a few heads and store where they are easily accessible.

Mustard and Cress.—Seeds should be sown in shallow boxes on fine soil pressed down and well watered with a rosed can, preferably before sowing. Cover with a piece of board or slate to keep quite dark, and stand in a warm house or Mushroom-house. When germinated, remove to the light.

Mushrooms.—If manure is obtainable, continue to collect and prepare for forming successional beds. A little of the shortest straw will do no harm, but the longest should be placed on one side. Keep the temperature of the structure between 55° and 60°. Avoid too much fire-heat and keep a look-out for slugs.

E. BECKETT, V.M.H.
Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Roses.—The planting of nursery Roses should now be proceeded with and finished as soon as possible. For choice, moderately strong plants are to be preferred to either weakly or very strong ones. Sometimes they are planted overdeeply to save staking, but for all the labour involved in steadying each plant with a stout stick, it is not worth while risking its future. Some Fern fronds worked among the shoots will save them from frost-bite.

Carnations.—Those planted out two months ago are now quite established, and if the surfaces of the beds have not been loosened since planting, let them be stirred up now, and any extra strong plants should each be tied to a short stake. Dust the plants and beds thickly with old soot, and see that neither ground nor feathered game can reach them. Those in pots in frames will need no water at the root till about the end of January at the earliest.

Ranunculus.—A portion of the stock may be planted now, being careful in planting not to break the claws. The French is perhaps the most useful section, and also the hardiest. A rather highly-manured, well-worked soil is essential. From 3 inches to 4 inches is deep enough to set the tubers, and they need not be more than 4 inches to 5 inches apart.

The Wild Garden.

Bulbs.—Any additions to be made may be completed at once of Bluebells and the white variety, Solomon's Seal, Dog's-tooth Violets and other common things. The handsomest of all early-flowering bulbous plants is the Crown Imperial, both yellow and red, yet it is very seldom seen. A stock can be raised from home-saved seeds when a few old plants are established.

Foxgloves.—Where these are already established it will be necessary to thin the seedlings to allow those left to strengthen to flower. New plantings may now be made, being very careful not to set the plants in lines. Foxgloves look best with a

backing of shrubs, and suitable positions should be looked out for new plants. The pure white is perhaps the finest form of all.

Climbing Roses.—Advantage should be taken of any rather bare dwarf tree or other suitable object to put in one or more Roses to climb upon it and clothe it with beauty. Queen of the Belgians, Crimson Rambler, The Garland, Elise Robichon and Dorothy Perkins are a few that will succeed. Other Roses worth introducing include varieties of *Rosa rugosa*, *arvensis*, *alpina pyrenaica*, *rubrifolia*, Scotch Roses and Briars. All these are best left alone when once established, the heaps of most of them being as fascinating as the flowers.

The Plant-Houses.

Plumbago rosea.—This is one of the choicest plants at present in flower. Unfortunately, it requires a stove temperature throughout the winter, and, consequently, those who would like to utilise plants for the greenhouse or for decorating apartments should remember they risk losing them. Water copiously with manure-water, and the plants will continue flowering for a long time.

Thysicanthus rutilans.—This is a charming old stove plant which produces very long, drooping sprays of flowers. It flowers at this time and requires hothouse treatment. The clear blue *Eranthemum pulchellum* asks for similar treatment.

Eupatorium micranthum.—Not quite so hardy as *E. riparium*, this is a more useful plant, cut-over specimens being very acceptable at this time of the year onwards. The flowers are gratefully scented and last a long time in a cut state.

Smilax.—Practically hardy, a look-out should be kept for aphid, which is apt to attack the sprays during the winter season. Syringing with warm water strengthened with extract of Quassia, or fumigating with nicotine, is imperative on its first appearance, otherwise the foliage may be spoiled if the aphid is allowed to spread unrestrained. Our stock is grown in narrow borders, and receives no water at the root during the winter.

The Fruit-Houses.

Strawberries.—The pots should now be stored for the winter in cold frames, first cleaning the surfaces of all extraneous matter. Bring the plunging material well over the pots as a means of preserving them from fracture during frost. The frames need never be quite closed unless during intense cold. Mildew sometimes appears on Royal Sovereign, and it may be judicious to dust all the plants with flowers of sulphur as a preventive.

Pruning Vines.—As soon as the foliage drops from Vines cleared of their crop they should be pruned, at the same time cutting away all snags that may not have been removed during summer—the proper time for doing so. If the rods cannot be washed forthwith, examine the borders lest they become over-dry, and if necessary apply a moderate quantity of manure-water.

Young Vines.—Those prepared for planting and now matured should be cut back to the length required. Usually 2 feet in length is sufficient. Store them meanwhile in a cold house where there is no fear of the least excitement to grow at the root. If there are no means of keeping out frost, the pots should be plunged well over the rims in some dry, non-conducting material to preserve the roots in an equable temperature and to keep them from being frozen.

The Vegetable Garden.

Broccoli.—In localities subject to intense frost, the old practice of lifting Broccoli and laying it in with the heads away from the sun, and also covering the exposed stems with earth, is one that can be recommended. A less laborious operation consists in cutting the roots with a spade, the middle of each row being deeply pierced with the tool. Now is the time to employ these simple precautionary means.

Brussels Sprouts.—Some growers remove a large portion of the side leaves, an unnecessary proceeding usually. At the same time, it is a mistake to have broken foliage and leaves that have yellowed naturally left about the quarter. Remove all such, and it may also be necessary to stir the ground about the plants with a fork. Little things such as this have a peculiar effect on the health, vigour and lengthened production of the plants.

R. P. BROTHKROFT.
Tynningham, Prestonkirk, N.B.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Chicory Salad.—To those who find Dandelion rather too sharp, one can strongly recommend Chicory as a winter salad of beautiful appearance and excellent flavour. To produce suitable bleached leaves, the tap-shaped roots are packed closely together in deep boxes with a little soil between. The boxes are placed in some dark, warm, moist position, where the leaves that are so much appreciated will quickly push up. In gardens where a demand already exists, there will be an ample supply of roots from seeds sown in the spring; but, failing that, it will not be either difficult or expensive to purchase the number wanted.

Stored Roots.—All Beetroots and Carrots ought now to be stored. This must not be interpreted to mean that they are to be thrown in a heap in a corner of an outhouse or a cellar, as is far too frequently the case, but that they shall be properly stacked in heaps, with sand, fine dry soil, or other suitable material between the layers of roots. When they are thus correctly dealt with, the roots do not shrivel and there is no loss of quality, flavour, or nutritive value; whereas, when they are simply thrown anyhow and anywhere, the loss may be safely put at not less than one-half. The actual place of storage is not nearly as important as the manner of doing it, and as far as the former point is concerned, each grower may well consult his own convenience; but in respect of the latter there is no latitude, because the correct way is the only way.

Potatoes.—Stored Potatoes will cause a considerable amount of worry this winter, and it is imperative that examination shall be frequent to guard against serious losses through disease making itself manifest in the stocks. Although all the tubers were, as far as it was possible for one to judge, perfectly clean and sound when stored, it is probable that disease spores were on the skins or in the soil adhering to the skins. When the tubers are massed, as is necessary in storing, a certain amount of heat is generated, and the sweating which accompanies this combines to create a condition that is distinctly favourable to the germination of those spores, and the disease runs riot through the stock unless the cultivator is so wise as to examine the tubers often with a view to the instant removal of any that show the slightest indications of being faulty. This ought to be a wet-weather task, and its vast importance must be set against its decided unpleasantness. Late Potatoes not yet stored should have attention, exercising care to see that they are quite dry.

Vacant Ground.—Let all vacant ground in the vegetable quarters have immediate attention where the land is on the strong side. Bastard-trenching should be the rule, since this gives depth without changing the positions of the first and second spits. The top ought to be left as rough and lumpy as possible with a view to getting it well stored with water and then hard frozen, because these two things improve its fertility and mechanical condition. It is easy, when soil has had plenty of water and frost, to secure that beautiful tilth or season on the surface which is so favourable to the sowing of seeds or the planting of plants. Light, sandy soil is almost invariably better left lying solid through the winter, to be worked as early after the turn of the year as the

state of the weather will permit. Manuring should be done at the time of working, in both instances.

Liming.—When garden ground has been exclusively manured with natural excrement for five or six years, this material should be entirely withheld and full reliance placed upon concentrated fertilisers for a season. In the autumn—now—lime should be spread on the rough surface until it is perfectly white—not a vestige of the brown earth must be observable—and after eight days it may be lightly pointed in with a fork; but this is not really necessary, as it will assuredly find its way down. This will sweeten the ground and vastly improve its fertility. H. J.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

TO PLANT VIOLETS IN A FRAME (Hex).—You may prepare a hot-bed of manure and Oak or Beech leaves, trodden firmly, so that a fierce heat will not be generated. Place the frame in position, and over the manure put 4 inches to 6 inches of loamy soil. Tread moderately firmly and plant the Violets so that the outer leaves almost touch. Water at once and keep the frame fairly close for a few days; then admit air in the daytime. You may also use a frame without any heating material; but the most satisfactory results are obtained when a little warmth is provided. We do not consider that Violet Mrs. J. J. Astor is very suitable for planting in Rose-beds, and suggest that various *Violas* be used instead.

HONEYSUCKLES AND SAXIFRAGES (R. S. D.).—Two good Honeysuckles are *Lonicera flexuosa* (flowers red and cream, very sweet-scented) and *L. sempervirens* (the scarlet trumpet Honeysuckle). Both are good and free in growth. The China Rose named is of moderate vigour only, and not quite suitable for the high fence named. American Pillar, Jersey Beauty, or Hiawatha would be more serviceable. The Saxifrages may be raised from seeds, though if you have no experience in such matters we do not advise you to undertake the work at the start. The Mossy varieties are easily raised, though the seedlings, naturally, contain many of a woody or poor character, while the seedlings of the eucrosted sorts often move very slowly. In all the circumstances you had better purchase a select lot of plants. As, however, you intend the rock garden for these alone, it should be arranged to meet the requirements of all or several sections, as a position suited to one of the *Bursicrana* set would be useless for the larger-growing Mosses or the big-leaved *Megasea* group. A single plant of the former would require but the merest chink or crevice with a free root-run to grow in.

TREES AND SHRUBS.

TO REMOVE DOUBLE-FLOWERED GORSE (T. H. K.).—Gorse, either single or double flowered, is not an easy subject to transplant. As your plants are not more than two years old, you may succeed with some of them, however, especially if you cut the branches well down at the time of transplanting. The work should either be done at once or left until late spring; midwinter would not be a good time for it. As a rule, the double-flowered Gorse is raised from cuttings inserted in a cold frame. When rooted, the young plants are potted singly into small pots. They are grown in pots until planted in

permanent positions. It would be a good plan to use some of the smaller shoots from your plants for cuttings to make up gaps where others die.

EVERGREEN FOR FRONT OF HOUSE (Wharfedate).—You will probably find that *Crataegus Pyracantha* or its variety *Lelandii* will suit your purpose better than anything else. Both grow fairly rapidly when once established, and have small, dark, evergreen leaves, bear white flowers in May and scarlet fruits in September. You had better obtain a plant established in a pot, for plants taken up from the open ground do not establish very well.

TO KILL THE STUMP OF A TREE (R. T.).—If you bore two or three holes, each 1 inch in diameter, into and to the centre of the trunk, and one hole into each of the main roots, and fill them with common salt, you will have no difficulty in killing your tree. Oil of vitriol would have the same effect, but it is dangerous to use. There is no necessity to cut the stump right to the ground unless you wish to do so. Left uncovered it will probably look objectionable, but you can easily clothe it by planting Ivy or a climbing Rose at the base and training the branches round the stump.

THE GREENHOUSE.

ASPIDISTRAS (N. H.).—The *Aspidistra* naturally forms a creeping rhizome from whence the leaves and flowers are produced, so that it always travels away from the centre. At the same time, there is a certain amount of individual variation, some plants having this character in a more pronounced fashion than others. Keeping the barren side to the light will not in any way influence the production of shoots there, though, of course, the leaves will naturally draw towards the light. The only thing that can be done to remedy the present state of affairs is to divide and repot the plant. It is now late in the year to do this, hence we should advise you to keep the plant as it is till next April. Then turn the plant out of the pot and take away as much as possible of the old soil. This will enable you to see the rhizomes and the direction they take. In all probability such a plant as yours will be the better if made up into two specimens. A good way to do this is to divide the plant into four, and if the back portions of the rhizomes are leafless, a portion may be cut away. Then take the two portions which are to form one specimen, and place them so that the growing points of each are towards the centre of the pot. In this way a well-balanced specimen will result, and it will then stand for some years before it needs to be again treated in this way.

FRUIT GARDEN.

AUTUMN PEARS CRACKING (Miss M. H.).—The cracking of the Pears is due to the fungus *Fusicladium pyrinum*, causing the disease called Pear scab. This fungus attacks the shoots and causes them to crack in a somewhat similar



PEARS ATTACKED BY THE FUNGUS *FUSICLADIUM PYRINUM*. THIS CAUSES THE LARGE CRACKS.

manner, and we recommend you to have all the dead and dying wood pruned out of the tree during the winter, and then spray the tree thoroughly with a solution of 1 lb. of caustic soda to 10 gallons of water to get rid of the lichen and so on. These measures will entail some trouble, but the reward will be edible Pears if you follow it up by spraying with half-strength Bordeaux mixture in the summer, once as soon as the petals drop, and again about the middle of June.

PLANTING FRUIT TREES (J. B.).—You may plant fruit trees any time between now and the end of March provided the weather is open. The best months are November and February. You will find pruning and root-pruning, also the treatment of *Lozanberries* and similar fruits, fully dealt with in "Fruit-Growing for Beginners," price 1s. 3d., post free, from this office.

PRUNING APPLE TREES AND RASPBERRY CLUMPS (Hex).—Both these subjects may be pruned at once or any time before the end of January. After the latter date, if the weather is mild, the sap begins to rise, and a certain amount of bleeding may result. Be careful to coat all wounds on your Apple trees with coal-tar as soon as made. This will act as a protection against fungus-spores which may be blown about from cankered trees. You do not need to shorten Raspberry canes very

much; they may be left 4½ feet to 5½ feet high, according to strength. Do not leave too many rods to each clump; five or six are usually quite enough. We presume that you have already cut the old canes out, for that is usually done as soon as the fruit is gathered.

ROSE GARDEN.

LIQUID MANURE FOR ROSES (J. D.).—It is well to vary the food for Roses, and we would suggest the following applications given two or three times a week in the growing season, varying the kinds as often as possible. It is well to have separate tubs and to allow the liquid to stand five or six days before using: Nitrate of soda, or sulphate of ammonia, half an ounce to 1 gallon of water; superphosphate of lime, 1½ oz. to 1 gallon of water; guano, 1 lb. to 18 gallons of water; cow-manure, 1 gallon to 1½ gallons of water; soot, 1 gallon to 18 gallons of water.

ROSES AND HEAVY SOIL (Oaks).—In order to make your stiff clay soil more workable, we should advise you to add plenty of burnt clay or, failing this, to incorporate ashes and gritty road scrapings. But the burnt earth is best, and any handy-man would show you how to start burning some of the clay, which should be done at once. In September you should commence to trench the land, and, in so doing, add basic slag to the lower spit of soil at the rate of 8 oz. to the square yard. If you get the land trenched and have the top left rough, you will find the frost and winds will make the surface more pliable, and when in this condition add some spent Hops liberally and let them be incorporated with the top soil. The variety is General MacArthur, one of our very best red bedding kinds.

MISCELLANEOUS.

INSECTS IN WATER LILY POND (G. W.).—With further reference to your Water Lily pond, it may do good to clean it out again in winter and leave it empty for a time, especially if there is any frost. Frost, however, may kill the larvae in winter.

DODDER ON GORSE (H. M. P.).—The only chance of eradicating Dodder is to burn all affected parts and use the ground for some other subject until it is free from Dodder seeds. Even if you were to succeed in killing the Dodder without injuring the Gorse by the use of some spraying compound, you would have another crop next year from seeds which have fallen about the base of the plants; therefore there is no option but burning those plants which are affected and thoroughly clearing the ground.

TO OBTAIN THE HEIGHT OF STANDING TREES (S. F.).—The best way to obtain the height of standing trees is to obtain one of the several instruments which are manufactured for the purpose, such as Weisse's Hypsometer, Brandis's Hypsometer and Clinometer, or Stanley's Apocometer. The latter is very handy, and may be easily carried in the pocket. It is supplied, with directions for use, for one guinea. Most of these instruments are worked on the principle of determining the height by means of triangles formed by the tree, a base-line to a given point, and a supposititious line from that point to the top of the tree. Full descriptions are to be found in Vol. III. of "Schliek's Manual of Forestry." There are other ways, simple but less scientific. For instance, the height of a tree may be obtained by measuring the length of its shadow, and then, by simple proportion, calculating the height of the tree by comparing it with the length of the shadow thrown by a stake of given length. Thus, if a stake 10 feet high throws a shadow 15 feet in length, a tree throwing a shadow of 150 feet would be 100 feet in height. Such calculations should only be taken on level ground. The Bushman's method of finding the height of a tree is as follows: A stake is taken, with the distance above ground equal in length to the height of a man from the ground to his eyes. The stake is placed upright in the ground, and the man lies upon his back with his feet against the stake, and when he is in such a position that the top of the stake is in line with his eyes and the top of the tree, the distance from his eyes to the base of the tree is equal to the height of the tree.

UTILISING MASON'S LEAVINGS (E. H. D.).—We think you could turn the leavings of the mason to good account, and know of no better way of utilising the mixture referred to than by erecting a small rock garden. As there appears to be an abundance of sandstone locally, and as you give us no idea of the size of your formal garden or its surroundings, both the size and the arrangement would have to be decided by yourself after you had decided whether you wished merely to use the material you possess, or simply make of this a sort of nucleus for some larger arrangement. As your garden is hemmed in by a wall, we advise you to keep any rockwork entirely free therefrom, as such things are not infrequently a delusion. A better way would be to arrange raised rockwork beds, say, at the four corners of the square; or, if the garden is not of large size—everything, of course, would depend upon your own desires and upon ways and means—you might arrange a series of rockery beds, with intersecting paths to the central square. These need not exceed more than 2 feet or 3 feet that of the ordinary level, and by inserting a drainage of clinkers, or brickbats, or anything you can get, there would not be much fear of undue wet. The intersecting paths should be of gravel or finely-broken sandstone chippings. The sandstone blocks—than sandstone there is no better material for rock building or for plants—could be employed in building the erections, and the old mortar and other material for mixing with the soil. If the whole of the available soil inclines to retentiveness, sand, old mortar and plaster might be mingled therewith to the extent of one half of the bulk. The arrangement should be on a liberal scale; that

is to say, the spaces for the plants should be large—3 feet to 6 feet across—seeing that only those of free growth would be suitable. Literal apartments such as these would accommodate a dozen plants of a kind, which would afford sheets of colour. In this way quite a host of Saxifragas, alpine and other Ploxes, Campanulas, Achilleas, Primulas, Polygonums, Litospersum, Sedum, Iberis, Androsaces, Dianthus, Thymus, Erigerons, Prunella, Veronica, Coronilla, Aubretia and others might become a permanent feature and afford infinite pleasure. It might also be possible at small expense to have a bed for moisture-loving plants, Lilies, Primulas, Trilliums and the like. There is a wealth of material available, and many ways of utilising it to advantage. The best way, however, could only be determined on the spot.

LICHENS ON TENNIS LAWN (A. H. Sussex).—The ground must be in a very stagnant state to nourish specimens of lichens such as you send. The usual remedy in such cases is draining the ground; but on the slope of the South Downs, with a chalky subsoil, this ought not to be necessary. Is it possible the position is shaded by trees, or on the north side of a high building? So much depends on local conditions in such cases that it would be better to call in a local expert—the green-keeper of a golf course or county cricket ground, for instance. A dressing of lime might kill it; or if not a large piece of ground, it might be worth while digging it all over, leveling and resowing with Grass seed early in September.

NAMES OF PLANTS.—Coningsby and J. J.—See next week's issue.—W. B. B.—*Wallenia amherstiana*.—A. C.—1, *Begonia* seedling not named; 2, *Eschynanthus speciosus*.—J. D. B., Cambridge.—1, Irene Watts; 2, Mrs. E. G. Hill; 3, Mme. E. Resal; 4, Queen Mab; 5, White Pet; 6, Aurora.

NAMES OF FRUIT.—W. H. Stabler—Grape Black Hamburgh.—W. T. Brunger.—The Pear arrived rotten and we were unable to identify it.—Healing.—1, Marie Louise d'Uccle; 2, Doyenné du Comice; 3, Mariéchal de la Cour.

SOCIETIES.

BRIGHTON AND SUSSEX CHRYSANTHEMUM SHOW.

THE thirtieth annual autumn exhibition was held in the Dome and Corp Exchange on November 5 and 6. Unfortunately weather marked the occasion, but its effect was scarcely perceptible in the matter of exhibits or in that of attendance. In regard to the former they possessed a very high degree of excellence, displaying the cultivators' skill in a marked degree, especially in the large classes for cut-blooms, where competition was very keen. The following constitute the primary awards:

For a circular group of Chrysanthemums arranged with Ferns or other green foliage plants for quality and effect in a circle 8 feet 6 inches in diameter, the first prize, a handsome silver cup and the society's silver medal, fell to S. C. Witting, Esq., Patcham (gardener, Mr. G. Chaudler).

For a circular group of Chrysanthemums only, Dr. Tulk-Hart, Brighton (gardener, Mr. J. Adis), scored.

For twelve bush plants, Pompons only, not fewer than eight varieties nor more than two of one variety, P. H. Bayer, Esq. (gardener, Mr. G. H. Bennett), was first, followed by S. Copstake, Esq., Hove (gardener, Mr. A. Sayers), and C. A. Wood, Esq., Brighton (gardener, Mr. S. Watkins). In addition to the first prize were a handsome silver cup and the society's silver medal.

CUT BLOOMS (OPEN).

For thirty-six Japanese, not fewer than twenty-four varieties nor more than two of one sort, a handsome silver bowl, the society's medal and first prize fell to G. L. Wiggs, Esq., Merstham (gardener, Mr. M. Sargent); second, Colonel C. P. Henty, Avington, Arundel (gardener, Mr. J. Harris); third, Mrs. L. C. Goad, Worthing (gardener, Mr. Charles Hack); fourth, the Rev. F. S. Selator, Lewes (gardener, Mr. J. E. Hickson); and an extra prize to L. Breitmeyer, Esq., Cuckfield (gardener, Mr. Hugh MacFadyen). There were six entries; the keenness of the competition will be recognised by the number of awards. The first-prize collection, which was remarkably fine and even, contained grand specimens of Frances Jolliffe, Mrs. Gilbert Drabble, Master James, William Turner, F. S. Vallis, John Peed, Willie Rawlings, Purity, Frank Payne, W. Mease, Mrs. L. Thorn and Mrs. R. Luxford.

For twenty-five Japanese as cut from the plants, not fewer than eighteen varieties, the premier award fell to H. Ramsbottom, Esq., Crowborough (gardener, Mr. A. Jewell), who showed magnificent blooms of Thorpe Beauty, Mme. G. Rivol, Mary Poulton, Mrs. Charles Beckett, George Milham '08, Mrs. C. H. Totty and Mrs. G. C. Kelly. Messrs. James Stredwick and Son, St. Leonards-on-Sea, were second, with L. Breitmeyer, Esq., third.

Twelve Japanese large-flowered, distinct: First, Mr. C. Fox (amateur), Tunbridge Wells, with fine blooms of Mrs. A. T. Miller, Alice Lemon, Lady Carmichael, Kara Dow, Lady Talbot and Master David; second, C. E. d'Avigdor Goldsmid, Esq. (gardener, Mr. Charles Earl).

Six incurved Japanese, large-flowered, distinct: First, Colonel Henty; second, Dr. House, Worthing (gardener, Mr. A. E. Clarke).

Six Japanese, one variety, any colour: First, L. S. Wigg, Esq., with Frances Jolliffe; second, Mr. W. H. Apted, Worthing, with W. Mease; third, Mrs. L. C. Goad, with Rose Pockett.

Six incurved, any one variety: First, Colonel Henty, with Clara Wells; second, Mr. Frank Green, with Romance.

Twelve Japanese Chrysanthemums (amateurs' division), not fewer than nine varieties nor more than two blooms

of one sort: First, Mr. C. Fox; second, Mr. T. West third Mr. J. J. Burrows. Accompanying the first prize was a silver challenge trophy, which now becomes the absolute property of Mr. Fox, who has succeeded in winning it three times and that in three successive years.

ROYAL HORTICULTURAL SOCIETY'S ORCHID CONFERENCE.

IN connection with the brilliant and remarkable exhibition of Orchids at the Royal Horticultural Hall on November 5 and 6, a conference was held in the Lecture-Room on Wednesday. A good audience of those interested in the breeding of these plants was present at each of the sessions, and excellent papers were read, albeit not couched altogether in the language of the unlearned. Mr. J. Gurney Fowler, the chairman of the Orchid committee, presided at both meetings, and kept the conference within the bounds of time set and the limits of discussion in the admirable manner one has learned to expect of him.

Professor F. Keeble, M.A., of the University College, Reading, read the first paper on "The Physiology of Fertilisation." He gave a brief outline of the history of our knowledge of the phenomena of fertilisation, a knowledge which is of comparatively recent growth and is still far from perfect. He pointed out that it was essentially the fusion of two masses of living stuff into one whole, one from the pollen tube, the other from the ovule. The whole of the curious phenomena of growth and development of the flower was aimed at securing the proper carrying of the pollen nucleus to its destination. Recent research had shown that this fusion was not always absolutely necessary to secure the development of an egg into an embryo. In some curious cases, such as that of *Zygopetalum Mackayi*, no matter with what pollen the stigma was pollinated, whether it be an *Odoontoglossum* or member of another genus, the seeds produced gave *Zygopetalum* pure and simple. Did fertilisation really occur here? One could not suppose it did. Pollination apparently brought about stimulation of the ovules to develop as well as a mass of living stuff to the egg-cell, and it was probably this stimulative effect that resulted in the production of seeds in *Zygopetalum*, quite apart from actual fertilisation. Experiment had shown that both chemical and mechanical stimulation would bring about similar results in certain cases. A brisk discussion followed, and many interesting points were raised and observations made.

Major C. C. Hurst's paper on "The Application of Genetics to Orchid-Breeding" was followed with equal interest. He referred to the extensive part the Royal Horticultural Society had taken in propagating a knowledge of genetics, and to the enormous progress the study had made during the past few years. He thought that if only the principles of genetics (which he detailed) were followed to a conclusion, much time might be saved, and certainty of result instead of chance would be gained in raising the desired scarlet *Odoontoglossum* or scarlet *Cattleya* or yellow *Cattleya*, and similar things still only dreamt of. The Orchids might have a stud book, and those known to yield good offspring because they were "pure bred" would acquire a stud value just as pedigree stock did, and with it an enhanced commercial value. He went further and showed how these pure-bred races might be obtained. Mr. Crawshaw perhaps touched on one of the greatest difficulties met with in testing the pureness or otherwise of a stock in the enormous mortality of the seedlings. But if this purity can be tested, there is no doubt that chance, with its prodigious number of useless plants, would give place to certainty in raising not only these but other plants.

After the interval for lunch, Mr. H. G. Alexander read his paper on "Epiphytic Orchids," and dealt with the principles of their cultivation in a most masterly manner. Everyone who has seen Sir George Holford's splendid exhibits will know that his Orchid-grower is no mere theorist, and when he insists on the importance of ample light and efficient ventilation at all times in growing such plants as *Vandas*, *Cattleyas*, *Lachias*, *Dendrobiums* and so on, attributing much more importance to light and air than to heat, one knows he is preaching his own admirable practice. One question often asked is, "Should epiphytic Orchids be manured?" Mr. Alexander gives an emphatic negative. Another, "How often should Orchids be watered?" Mr. Alexander says (and every grower will agree with him) no man can answer that question. He insisted on the need for a study of the conditions under which the plants were grown, as well as the state of growth of the plant. A host of cross-questions followed Mr. Alexander's paper, and to them straight answers were promptly returned, to the benefit of all present.

Then followed Mr. Thwaites' paper on the raising of albino Orchids and his remarks on the difficulties he had experienced in raising them and in understanding the various theories regarding them that had been propounded from time to time. However far one may be inclined to follow his conclusions, everyone will certainly agree with his remarks as to the desirability of not naming merely whitish forms "alba," but confining that term to real albinos. Mr. Thwaites' remarks called up considerable discussion, and one must wait to study the full text of his paper and that of Major Hurst, who dealt with the same subject, before one can see precisely the value of their respective arguments.

Sir George Holford, in moving the vote of thanks to the chairman at the end of the meeting, confirmed the remarks of his Orchid-grower concerning the need of light and airy situations and structures for the growing of Orchids, and deprecated the use of close and dark houses and permanent shading upon them. Needless to say, growers will take his words to heart, and we shall see fewer cases of mortality among Orchids brought about by partial starvation through lack of light, and suffocation through lack of air.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

NOTES OF THE WEEK.

Fruit Research Plantation for South-Eastern Counties.—At a meeting of the Governors of the South-Eastern Agricultural College, Wye, on Monday, the 11th inst., the proposal to establish a fruit research plantation in the South-Eastern District was considered. It was decided to accept the responsibility of administering such a plantation with the aid of the grant of £500 offered by the Board of Agriculture. We hope that the researches and experiments will be of a practical as well as a scientific character.

Erigeron Quakeress.—Hardy, elegant, free-flowering and profuse, this is destined, we think, to figure with the indispensable plants of the good herbaceous border in the near future. Indeed, it would do so the moment it is known, since its good attributes are as clear as the day. The colour, which in the summer-time is deepest mauve, assumes a paler tone in its latter-day developments, while there is a refinement withal—habit and flowering alike—that is not given to any of the forms of *E. speciosus*.

The Rock Garden at Kew.—Further alterations are now proceeding in the rock garden at Kew. In the position formerly occupied by the dripping well will be a ravine, through which will flow a cascade. The latter, after passing through a series of four little waterfalls, will empty into a bog garden. When completed, the alterations will form a great improvement, and will be quite in keeping with the general construction of the rock garden, which resembles the rocky course of a stream such as may be met with in the side valleys of the Pyrenees.

Rose Gloire de Dijon as a Standard.—One is fairly accustomed to seeing this Rose trained to walls and fences, but not so often as a standard. At the beginning of November we had quite a number of expanded flowers, and several more buds fast developing on a standard specimen. Of no other variety in standard form could this be said. Should anyone be trying this variety for the first time in this way, we would add, do not prune too hard, and if a shoot or two is long enough to arch over and tie to a stake, so much the better. Practically every bud will break and flower.

Variation in Ferns.—The variation in *Nephrolepis exaltata* is wonderful, and is all the more remarkable from the fact that though, according to the "Dictionary of Gardening," the original species was introduced as long ago as 1793, it is only within the last decade or so that this extreme variability has manifested itself. This was not due to it being but little grown, for *N. exaltata* has long been a popular market Fern, especially in the United States, where it is commonly known as the Boston Fern. The first plumose forms, too, came to us from across the Atlantic; but now

we have in this respect outdone the Americans themselves, the most extreme form in mossy development being represented by the variety *Willmottæ*, which was given an award of merit by the Royal Horticultural Society on November 5.

Oil from Sunflower Seed.—The annual report on the work of the Imperial Institute during 1911, just published, contains the following note on Sunflower seed: "A sample of this seed was received from the Sudan. The kernels yielded 47.9 per cent. of oil, equivalent to about 22 per cent. expressed on the whole seed. The oil was bright yellow and somewhat viscous, and would be suitable for edible purposes after refining. The residual cake would be suitable for use as a feeding stuff. So far Sunflower seed has not been largely worked in the United Kingdom as an oil seed, but experiments in its utilisation have been made recently in Hull."

Winter-flowering Sweet Peas.—In Bulletin No. 319, just issued by the Cornell University, Ithaca, New York, Mr. A. C. Beal describes in detail experiments which have been conducted with winter-flowering Sweet Peas at the Cornell University. We have on some previous occasions dealt fully with the *Télemly* varieties, and also those that originated with Mr. Engelmann of Saffron Walden. The trials at Cornell University were conducted mainly with a view to ascertaining the time it took from seed-sowing to get plants to the flowering stage. The Engelmann varieties took from 101 to 110 days; Paul's Improved *Télemly* varieties, 92 to 160 days; and Arkwright's *Télemly* varieties, 88 to 107 days. Descriptions of all the varieties sent for trial are included in the bulletin.

The Pollination of Fruit Blossom.—In the current issue of the Journal of the Royal Horticultural Society, Mr. Cecil H. Hooper's lecture on the above subject is printed in full and makes most interesting reading. We quote the following from the summary: "It seems as if in the open field or garden Strawberries are pollinated by the movement of the air. Raspberries and Loganberries need insect pollination. The Raspberry is more dependent on insect pollination than the Loganberry. Hive bees are very fond of Raspberry blossoms, and even more so of those of Loganberry. In Gooseberries and Currants it is of the utmost importance to have plenty of hive or bumble bees near, as no fruit is set without them. They are also a necessity in the case of Pear, Apple, Cherry and Plum. With our present knowledge it seems advisable in planting to alternate the variety in each one or two rows, choosing varieties that blossom at about the same period. In gardens do not plant single trees of a kind, all trees of one variety together, but rather intermix the varieties. Keep hive bees, especially in suburban gardens and on large fruit farms, and in districts where large areas of the same kinds of fruit are grown."

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Rose Bardou Job Flowering in Mid-November.

That excellent Rose Bardou Job is flowering still on the base of an outside conservatory wall, where it is trained to climb horizontally. I have to-day (November 16) gathered sufficient of these Roses to fill a vase, and several buds—if the frost will allow—will give yet another vaseful in a few days. This Rose commenced flowering on my conservatory in May. The very decided otto of Rose perfume is as strong now as it was in the hot weather.—ELEANOR G. SHELLEY, *Alresford, Hants.*

Nicotiana affinis in November.

Of late years I have been shy of using this good plant in flower borders because of its way of drooping with half-closed flowers in daylight; but two days ago, in the middle of a time of bitterest winter weather, it showed itself to be a valuable hardy flower for cutting. A belated patch, sheltered by a group of Hydrangeas, bore several shoots of perfect bloom—the flowers wide open, evidently taking the dim wintry light for twilight. A good bunch of Iris *stylosa* had just been brought in, and I was seeking for something to accompany them. The white Tobacco seemed to be the immediate answer to the search, and, with some small branches of bright green foliage of *Skimmia oblata*, has made as charming a winter bouquet as one could wish to see.—G. J.

Large-flowered Climbing Roses.—In a recent note a contributor regretted there were so few Roses of this class, but he overlooked those two grand deep crimson, scented flowers Ards Pillar and Ards Rover, Hybrid Teas, eminent also for hold, handsome foliage and perpetual flowering, while they often make a growth of 9 feet in a season. Lady Waterlow was very rightly named. I might also mention Johanna Sebus, reddish blush, of the Dijon breed, exquisitely scented. The term "climbing" properly refers to rambling Roses, but there is a class of half-rampant Roses suitable for pillars that are very welcome, such as Climbing W. J. Grant, Climbing Lady Ashtown and Climbing La France, all well worth attention. A very fine single, rapid climber, with large blooms produced in clusters of rich pink, is American Pillar. Billiard et Barre is a showy pillar Rose of deep gold, Gustave Regis is pure yellow, and Climbing Frau Karl Druschki white; while such Hybrid Perpetuals as Hugh Dickson, J. B. Clark and Bardou Job (Hybrid Tea), of fiery crimson, are good pillar Roses, also Mme. Jules Gravereaux in the creamy blush colour. I think also that the rugosa hybrids Juliet (fiery orange) and Conrad Ferdinand Meyer (silvery blush) will make useful pillars.—GEORGE BUNYARD, *Maidstone.*

Bitter-pit in Apples.—Last year I drew attention to the remarkable prevalence of the Apple trouble known as bitter-pit, and in THE GARDEN for March 30 last gave a table comparing the weather with the prevalence of the disease in different years. The disease has been known for at least fifty years, and up to the present its occurrence seems to depend upon the weather conditions and the water supply more than upon anything else. This season the trouble is, fortunately, rarely met with. I have seen it in very few varieties in any part of England, either at exhibitions, in the market, or in the garden itself. Warner's King has suffered in some places, and possibly some few other soft-fleshed fruits, but to nothing

like the extent to which they suffered last year. I have not met with it in any hard-fleshed Apples this season. These facts make a comparison of this season's temperature and rainfall with that of last most interesting, and, as will be seen, the comparison supports my original suggestion as to the connection between the weather and the disease. I give last year's weather record for August and September and that of the corresponding months of this year side by side, so that comparison may be the more easily made.

| | 1911 | | 1912 | |
|---------------------------------|---------|------|----------|------|
| | Aug. | Sep. | Aug. | Sep. |
| Mean temperature (degrees) .. | 67.1 | 59.1 | 57.2 | 52.6 |
| Highest in screen .. | 96.2 | 91.0 | 67.6 | 68.0 |
| Lowest in screen .. | 43.2 | 35.4 | 41.2 | 32.5 |
| Mean soil tem., 1 ft. .. | 67.7 | 60.3 | 60.0 | 55.3 |
| .. " 2 .. | 66.6 | 61.3 | 59.8 | 55.3 |
| .. " 4 .. | 64.2 | 61.6 | 59.4 | 56.8 |
| Rainfall (inches) .. | 0.62 | 1.01 | 1.77 | 2.99 |
| No. of days of rain .. | 6 | 9 | 26 | 4 |
| Total rain, May to September .. | 5.73in. | | 13.09in. | |

—SCIENTIST.

A Useful Winter Endive.—Sutton's Winter Lettuce-leaved Endive is being much enjoyed here just now, used as a simple salad with cheese. We blanch it by tying the plants up tightly with raffia when they have attained full growth, and placing a large inverted flower-pot over each, with a crock over the drainage hole and a handful of soil thrown on top of that. This little extra trouble ensures a much finer and better blanched plant than the ordinary slipshod method of laying slates on the top. I even go to the trouble of covering a number every week (on a dry day) and numbering the pots, so that we may know which to use first. After three weeks or a month we find large, crisp heads of a beautiful ivory whiteness and with a flavour reminiscent of Cob Nuts, far superior, in my opinion, to that of any of the curled Endives that are so much grown, and which are, after all, more in the nature of a simple garnish to a salad than an appetising adjunct, such as the finely-flavoured plant of which I am writing. I would mention that we get our best Endive here from plants that have been put out on beds cleared of Daffodils. They evidently like the bone-manure that remains in the soil.—F. HERBERT CHAPMAN, *Rye.*

Saxifraga burseriana "tridentata."—I for one am grateful to Mr. Farrer, page 574, for his timely lifting of the veil from the above absurd name, and for furnishing, in his usually lucid authoritative style, not only the correct name, but the "why and the wherefore" of it at the same time. To me the name was ever a puzzle, and I well remember, when first seeing it, asking the reason why and pointing to its meaninglessness and absurdity. The only excuse for the error is the not very distant step between "tridentina" and "tridentata," and the corruption, doubtless, has been due to had writing, a blurred or indistinct labelling, or similar cause. I am interested, too, to know more of the history of this fine form, which, curiously enough, I characterised on seeing it as not far removed from the true S. b. major of the Dolomites. It is, indeed, so far as my plant of it at present indicates, a somewhat more tufted form, major spreading laterally more than the others. Now one knows that major, Gloria, magna and tridentina are, as it were, an exclusive set apart—a glorious quartet—each an aristocrat in its way, and as such fitted for association with the choicest and best. They are all desirable, too, not for their inimitable beauty alone, but also because, flowering at divers times, they ennoble their race thereby while enriching our rock gardens and alpine-houses for a more extended season

with precious gems of which a few years ago we had not even dared to dream.—E. H. JENKINS.

The Deciduous Cypress Fruiting.—The note by "W. D." and the illustration showing a cone-bearing branch of the above-named tree, page 562, November 9 issue, are very interesting. In the gardens at Cadland Park, near Southampton, there is one of the finest specimens of the Deciduous Cypress in the United Kingdom. For more than ten years I had charge of the gardens, and while there noticed fruits on the branches several times. I had the tree measured. Ten years ago it was more than one hundred feet high and measured 14 feet round the trunk at 4 feet from the ground. The position was at the head of an ornamental pond; the "knees" grew up from the sloping grass bank, and many roots permeated the mud at the bottom of the pond. The trunk had a clear rise, free from branches, for about twelve feet. Two other specimens, about thirty-five feet high, grew in boggy ground near. More trees should be grown in the country than there are at present, but in suitable positions.—G. G.

The Grading and Packing of Fruit.—In reading your report of the Kent Commercial Fruit Show on page 568 of November 9 issue, I see mention made of the Federation boxes. It would be interesting to know the measurements of these and where they can be obtained. I am also interested to know what a London bushel of Apples is, and especially how it is arrived at. Are the Apples measured? I am told that most growers send 40lb. to 42lb. of Apples for a bushel, and therefore I judge it must be a measure, for surely a grower cannot fix the weight of his Apples at a variable total if they are sold by weight. In the Midlands Apples are sold by the peck, and 16lb. is the weight of a peck, so 64lb. make a bushel. It seems to me that we must be selling on very bad lines if 42lb. suffice for a London bushel. Pears and Plums are worse still, for 18lb. are supposed to be a peck. Seeing that an Act of Parliament was passed many years ago making the selling of fruit by measure illegal, would it not be better if all fruit were sold by the imperial stone or hundredweight? If this were done, market reports would be understandable and of value to readers all over the country, whereas at present they are misleading or, as is often the case, convey no information whatever to the reader. Passing on to another subject, your correspondent "B.," page 562, says, "Marie Louise is generally grown on a warm wall." My experience is that on a warm wall it blooms so easily as to be generally destroyed by spring frosts, whereas on a wall facing north-west or east it succeeds admirably. Again, in the case of Plums, I suppose the number of trees of Victoria planted on walls equals nearly all the other varieties put together, and yet the fruit is spoilt on a warm wall, and it is perhaps the worst of all Plums for training owing to its habit of growth. The best way to grow Victoria is as a standard or half-standard and keep the pruning-knife away from it, and reserve the walls for those varieties which are improved by being planted on them.—A. H. PEARSON. [The size of the boxes for fruit was given in an article on fruit-packing on page 440 of our issue for August 31. It is 20 inches long, 14 inches wide and 10 inches deep. At the time of going to press we have not been able to ascertain where they can be obtained. The so-called bushel sieve sent to the London market holds, approximately, 3½ pecks. We agree with Mr. Pearson that selling by weight is by far the best.—Eo.]

Daffodils in an Orchard.—From time to time we have called attention to the picturesque effects that may be obtained by growing Daffodils in grassland. At no time do these flowers appear to greater advantage than when grown under the partial shade of old Apple or other fruit trees. The accompanying illustration depicts a charming spring scene in Mr. G. Hawker's orchard at Strode, Ermington, Ivybridge.

Edwardsia or Sophora grandiflora.—As so much has been said in favour of the Kowhai in your columns of late, it may be worth while stating that it is hardy and flowers well in some parts of the South-West of Scotland, especially near the sea. It cannot be considered a good tree for inland gardens in Scotland, as, so far as I know, there have been no successes with it in the open in gardens away from the sea. I know of a few places where it has been established for a good many years, and where it flowers well annually. It is very beautiful with its handsome clusters of golden yellow flowers.—S. ARNOTT.

Pentstemon Newbury Gem.—Any grower desirous of securing a fine subject for massing could not do better than choose the above-named plant. It is a dwarf, compact Pentstemon, producing innumerable scapes covered with small crimson-scarlet flowers. There are also a White Newbury Gem and a Pink Newbury Gem, the latter being a beautiful soft shade of rosy pink, and is not only valuable for bedding purposes, but is suitable for cutting and house decoration. The plants bloom throughout the summer and autumn months if the leading shoot is pinched out when the flowers are passed, thereby inducing many side growths to form, which soon give a good account of themselves. In addition to those already quoted are Myddelton Gem, a pleasing shade of pink, and Southgate Gem, which is scarlet in colour.—T.

Geranium wallichianum.—From time to time notes have appeared in commendation of this plant, and yet it is but comparatively rare that one finds it in collections of hardy plants. This, to me at any rate, is somewhat surprising, and can only be, I think, because its merits are not known, as I know of few plants which better deserve a place in the hardy flower garden. Its season of flowering is a long one. A plant in these gardens has been flowering profusely for over two months, and has every appearance, weather permitting, of continuing to flower for some time to come. It is certainly one of the most charming plants we have at this season. It is quite a good border plant, but I prefer it on a sloping bank or on the rockery, if one has room for it, as it soon covers a large space, and would be out of place, besides being a danger to other plants, on any but a large rockery. The flowers are a delicate shade of blue, with a central zone of white, with dark lines radiating from the centre to nearly the outer edge of the petals. The plant grows from 3 feet to 6 feet high.—J. D. HALIBURTON, *Botanic Gardens, Bath.*

FORTHCOMING EVENTS.

November 28.—Hull Chrysanthemum Show.

December 2.—National Chrysanthemum Society's Floral Committee Meeting at Essex Hall at 3 p.m.

December 3.—Royal Horticultural Society's Meeting and Perpetual Flowering Carnation Society's Show (two days) at Vincent Square, Westminster.

SOME WINTER EFFECTS OF FLOWER AND SHRUB.

NO garden, if thoughtfully planted, need be without an appreciable amount of bloom on hardy plant and bush during the winter months. No reasonable person expects to find flowers flourishing in actual frost; but in all the milder spells that occur throughout the cold season there are a number of flowers that may be trusted to appear faithfully. Towards the end of November there is the large Christmas Rose, coming into bloom a good month before the others of its kind. The flowers are of large size and great substance. By the middle of December there will be the yellow Winter Jasmine, that will go on for some weeks; and from November onwards, in all open weather, flowers may be gathered from the charming Winter Iris (*I. stylosa*). It is true that in the last few winters, since there have been rainy and comparatively sunless summers,

the sweetest of the garden's flowers. The Winter Sweet (*Chimonanthus fragrans*), with its excellent and penetrating perfume, is another shrub-bloom of midwinter, though it is hardly showy enough to class among flowers of special effect. The Witch Hazel (*Hamamelis*) bears some resemblance to the Winter Sweet, in that the blossoms come closely set on the leafless shrub and have the same kind of yellow colouring. But though the petals are much narrower, and are curiously twisted, the bloom is so abundant that it has a distinct effect as a flowering shrub; moreover, it is hardier and can be planted in the open.

But though we have all these precious winter flowers, the greater value of the garden will be in the deep, rich colouring of our best evergreens—Yew, Box, Holly, Cypress, Bay and Ilex, to name only some of the more important. Then, of lowlier shrubs, *Berberis Aquifolium*, in its many colourings of green, red and varying shades of ruddy bronze is of the utmost value. There are also *Skimmia*, *Andromeda* and its allies, and the beautiful *Alexandrian Laurel* (*Ruscus racemosus*). *Rhododen-*



AN EFFECTIVE GROUPING OF DAFFODILS IN AN ORCHARD AT STRODE, ERMINGTON, IVYBRIDGE.

this capital plant has been more shy of bloom. It is a native of Algeria, and it would seem probable that a vigorous bloom may depend a good deal on such a thorough ripening of the rhizome as it always receives in its natural habitat. It is therefore desirable to give it a dry and sunny place, such as on a slightly-raised border against a south wall, in rather poor soil; for we find that in richer ground it produces very large leaf growth and but little bloom. There is also a beautiful white variety. Also from November onwards *Czar Violets* should be in flower. After Christmas, *Snowdrops* and the little yellow *Winter Aconite* make charming effects in wild ground, such as beneath trees in thin woodland; the *Winter Aconite* will even grow under *Beeches*.

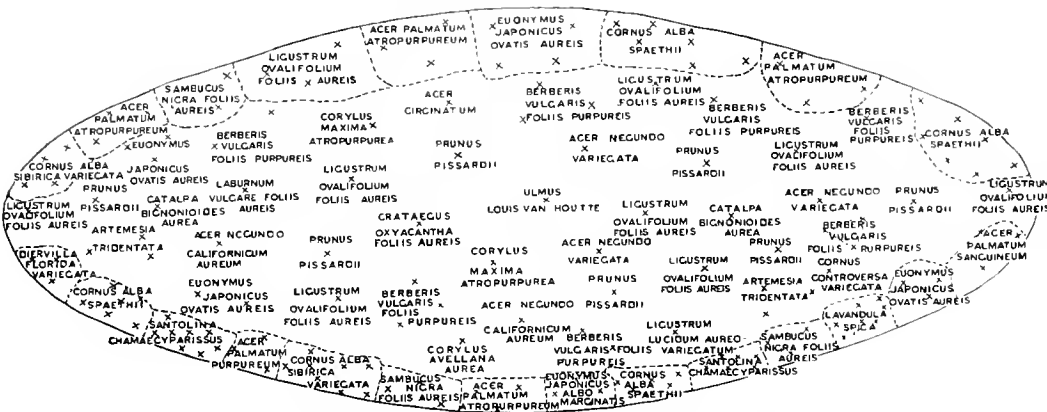
Periwinkles are flowers of February, prettiest also on banks in wild ground. The same month brings the blossom of *Daphne Mezereum*, whose low-toned pinkish bloom, coming before the leaves, reminds one, by its strong, pleasant scent, of the several others of its family that are among

drons, especially those of the *ponticum* class, are in their deepest and glossiest foliage. Besides these, we have the evergreens of grey and glaucous colouring—*Junipers*, *Deodar* and *Picea pungens*, *Retinospora* and others. Some of these also take on a ruddy tint in winter. But there are trees and shrubs of quite other colouring; a whole range of gold-variegated varieties that can be used with excellent effect, especially if grouped rather near together. Of the trees, the *Golden Hollies* and *Cypresses* are among the brightest, and among shrubs the *Golden Privet* is of fine colouring and has the good habit (although it is really deciduous) of holding its leaves till well after Christmas. The gold-variegated *Elæagnus* is also one of the handsomest of shrubs with coloured leaves. The gold-splashed *Euonymus* is only hardy in the South; even at an hour's journey south of London it is generally spoilt by frost. The hardy *Bamboo*, *Arundinaria japonica* (more commonly known in gardens as *Bambusa Métake*), is bright and cheerful through the worst of the winter.

Delightful effects of red and yellow colouring may be obtained by rather large plantings of the yellow and scarlet barked Willows and the Red Dogwood. For this kind of use the Willows should be cut down every year at the end of the winter, for the shoots of a year old are the brightest in

spring till autumn, providing the grouping of the colours is carefully done. The accompanying plan of such a border at Kew, 120 feet long and 40 feet wide, will give readers an idea of the grouping. At first sight the plan appears to be crowded, but it is quite easy to go over such a

foliage to form coloured clumps which are beautiful throughout the year, it will be found by experience that the foliage of deciduous trees and shrubs is, generally speaking, more brilliant in colouring than those with persistent leaves. Those mentioned below have brightly-coloured foliage, and are very suitable for the purposes referred to in these notes.



PLAN OF A BORDER OF ORNAMENTAL-FOLIATED TREES AND SHRUBS. THE PROPER ARRANGEMENT OF THESE AT PLANTING-TIME IS VERY IMPORTANT.

colour. It should be remembered that two of our hardy Ferns, namely, Polypody and Hart's-tongue, are at their best in early winter. At the same season, in some years, masses of berries on Hawthorns, especially when wet with rain, are surprisingly bright in colour. When there are very few Holly berries, we much miss their brilliant scarlet in the case of trees that usually bear well. Where Mistletoe grows freely, as in some places where there are old Eime trees, the bright yellow-green of the great bush-like masses has a strange effect by contrast with the grey stems and branches of the leafless trees; for it looks as if all the life were in the parasite only. Many people have been disappointed by trying to grow this handsome thing from the berries taken from branches cut for winter ornament; the berries are then quite unripe. They are not fit to sow till April. G. JELLYL.

border in March each year and shorten the long growths of those which are trespassing into the space which should be occupied by their neighbours. In this way comparatively large shrubs, and in some instances trees, are kept trimmed to a moderate size. By cutting back the young shoots of the Golden-leaved Elder, Sambucus nigra foliis aureis, to within one or two eyes of the old wood each spring, vigorous young shoots push up, with plenty of leaves which colour better than those on old wood. The subjects planted at the back of the bed illustrated are somewhat shaded by trees in the vicinity, and are planted with the idea of furnishing in addition to colour effect. In front of the bed there is a wide stretch of lawn. The bed faces south, while behind it on the north side are a number of large trees, the green leaves of which form a useful and effective background.

Variegated Elm, Ulmus antaretica aurea; Van Houtte's Golden Elm, Ulmus Louis Van Houtte.

Deciduous Shrubs.—Japanese Maples, Acer japonica aurea and A. palmatum varieties; Purple Barberry, Berberis vulgaris foliis purpureis; Variegated Dogwood, Cornus alba sibirica variegata; Spæth's Golden Dogwood, Cornus alba Spæthii; Variegated Dogwood, Cornus controversa variegata; Golden-leaved Nut, Corylus avellana aurea; Purple-leaved Nut, Corylus maxima atropurpurea; Golden Privet, Ligustrum ovalifolium foliis aureis; Variegated Privet, Ligustrum lucidum aurea variegatum; Golden Elder, Sambucus nigra foliis aureis; and Variegated Snowberry, Symphoricarpos orbiculatus variegatus.

Evergreen Shrubs.—Gold and Silver Hollies, Ilex Aquifolium varieties; Variegated Box, Buxus sempervirens varieties; Golden Euonymus, Euonymus japonicus varieties; Variegated Elaeagnus, Elaeagnus pungens varieties; Lavender

TREES AND SHRUBS.

HOW TO ARRANGE ORNAMENTAL TREES AND SHRUBS.

NUMEROUS trees and shrubs of a deciduous and evergreen character are conspicuous by reason of their coloured foliage. Unlike flowers, fruits or the autumn tints, which are all more or less of short duration, trees and shrubs with coloured foliage last in good condition for a long time, the deciduous ones throughout the summer and the evergreens the whole year round. In small gardens it may be only possible to plant a few single specimens or mix in a few coloured-leaved shrubs with the green-leaved kinds in the shrubby border. Used in this way they are pretty, but the effect obtained is nothing approaching their liberal employment in the pleasure grounds and parks of large estates. Here large groups or masses of one kind may be planted to form a feature in the landscape, perhaps on sloping ground or by the lakeside.

A border or large bed of mixed coloured-foliaged trees and shrubs gives a charming picture from



FLOWERING SHOOT OF STYRAX JAPONICUM, A BEAUTIFUL BUT LITTLE-KNOWN HARDY SHRUB.



ROSE SUNBURST.

Cotton, Santolina Chamæcyparissus; Lavender, Lavandula spica; United States Sage Bush, Artemisia tridentata; Tree Purslane, Atriplex Halimius; several Tree Ivies, Hedera Helix varieties; and numerous conifers, especially varieties of Cupressus.

A LITTLE-KNOWN FLOWERING SHRUB.

(STYRAX JAPONICUM.)

Thus is a large deciduous shrub or small tree, native of Japan. A fairly sheltered position is the most suitable, as, although the flowers do not open till June, on several occasions we have had the buds on trees in open situations ruined by late spring frosts, while a tree in a sheltered position has entirely escaped. The soil should be fairly light and well drained, a mulching of leaf-mould and manure being beneficial in summer. Nature has disposed the branches in a somewhat flat, spreading manner, the better to show off the white flowers. These are drooping, bell-shaped, about half an inch across and very freely borne on the branchlets, appearing several together from the axils of the leaves. As *Styrax japonicum* ripens seeds freely in this country, it should soon be fairly common, for if not hardy in cold districts, it is worth a place on a wall. The fruits are egg-shaped and the size of a hazel-nut. A. O.

previously received a card of commendation at the autumn show in 1909.

Mrs. Amy Hammond (S. McGredy and Son, 1911).—Another gold medal Rose of the National Rose Society, also awarded at the Salisbury Show in 1910, and those who have grown this Rose have nothing but praise for it. The raiser calls it "everybody's Rose"; it certainly has been very pleasing with me. I had some splendid flowers of it early in the season, good enough for any box, and I venture to think when better known it will be very popular. It found its way into a good many boxes this season, although it was only sent out last year. Its colour is not exactly describable in a few words. Flesh with a peach flush is as near as I can get it. The rosarian's "peach" is something quite distinct from the colour of the fruit. The flower is of excellent shape and size, sweetly perfumed, and the plant of vigorous, good branching habit. A Rose to be obtained at the earliest opportunity.

Stewart Clark, Frau Karl Druschki and others—a great victory this. It was equally good at the "National," and was very well shown at Belfast. I have found it remarkably easy to grow, and notwithstanding its shape and enormous number of petals, it opens well and freely. The petals have fine substance, and there is nothing tissue papery about them. Its foliage is remarkably strong and leathery, and has seven leaves instead of the usual five. Altogether a very distinct and beautiful Rose. *Southampton.* HERBERT E. MOLYNEUX
(To be continued.)

COLOURED PLATE.

PLATE 1459

ROSE SUNBURST.

This variety is one of the latest of a whole series of beautiful yellow Roses which have come into com-

THE ROSE GARDEN.

NOTES ON NEWER ROSES.

HYBRID TEAS FOR EXHIBITION.

(Continued from page 580.)

Mrs. A. E. Coxhead (S. McGredy and Son, 1910).—It was rather surprising to me to see this Rose in practically every winning box in the early shows this year, and it also turned up smiling at the autumn show. It is, no doubt, accounted for by the fact that its shape is so nearly always perfect; and if the same could be said of its colour (as it can be said of its scent and habit of growth) it would indeed be one of the "great" Roses. But its colour is undoubtedly its weak point, and it is difficult to catch it right. It does not like tying, and shading does not appear to remedy the defect; but when this is said, one has said the worst. I hardly know a Rose that so frequently comes a perfect shape, and this, after all, is the main thing with the exhibitor. A big flower of fine colour with a bad split does not, and should not, count as much as a good flower perfect, except that it is a bit off colour. I do not mean a bad colour for the variety, but one that is naturally not a good colour. Mrs. A. E. Coxhead is one of these, Mrs. Stewart Clark another. No doubt Mr. Pemberton's eulogy of this flower when he described it as the best new Rose of the year has had a great deal to do with its popularity. I should not be doing this Rose justice if I omitted a reference to its perfume. It is delicious, and is as strongly marked in November as it was in June. It is a real good autumnal, and is seen at its best under artificial light, electric light for preference. It was awarded the gold medal of the National Rose Society at the Salisbury Show in 1910, having



ROSE DOROTHY PERKINS OVER A VERANDAH AT SHANKLIN, ISLE OF WIGHT. NOW IS THE TIME TO PLANT.

Mrs. Cornwallis West (Alex. Dickson, 1911).—Here is a Rose after the exhibitor's heart; a very delicate blush ivory white in colour, just sufficient colour in it to remove it from a pure white, but that is all. I see it described in some catalogues as "beautiful pink," but that is not correct. It is equally distinct in shape, getting away from the pointed petal. We have here a round Rose of the type of Her Majesty, only better. Globular, perhaps, is the correct term. Its growth, however, has nothing in common with Her Majesty; but, though vigorous, is as branching as any Hybrid Tea, with foliage that contrasts well with the flowers, which are produced singly on every shoot. It was the gold medal Rose of the Salisbury Show, and there were the unusual number of four. It has been splendidly exhibited by the raisers throughout the season. Commencing at Southampton, a box of twelve in a strong class of twenty-one entries for any white or pink won first prize, beating Bessie Browns, Mildred Grants, Dean Holes, William Sheans, a very fine box of Mrs.

merce recently. Until a few years ago good yellow Hybrid Teas were not in existence, but during the last decade hybridists have produced them in abundance. In Sunburst we have an excellent Rose, as it has perfume, lovely form, long lasting qualities, and above all, from a commercial point of view, excellent habit. A curious point about this Rose is that the second crop of blooms, as well as those produced from lateral shoots, come of a rich cadmium yellow, passing to yellow orange in the centre and without the white shading. It is very free-flowering and perpetual, and has already created quite a sensation in the commercial growing centres of America. Under glass it is a wonderful success as an autumn Rose, and I was recently informed by a commercial florist, who has some thousands in pots and planted out, that the demands, both of the home market and Paris, far exceeded the supply. Out of doors I should term it a glorified Mrs. Aaron Ward. The flowers for the coloured plate were supplied by Messrs. Stuart Low and Co. of Bush Hill Park. DANECROFT.

ROCK AND WATER GARDEN.

ROCK GARDENS IN THE MAKING.

(Continued from page 577.)

Rock-building.—Having considered the various types of rock, suitable and unsuitable, the operator has now to make his choice and to proceed to the more serious constructive work. It is in this connection that the chief blunders are made. Writers on the subject of rock gardening repeatedly urge the teachings of Nature without giving the least idea of the good and the bad so far as our own gardens are concerned. In Nature, of course, everything is right, though it does not follow that all her object-lessons would be alike suitable for our purpose. For example, we see in Nature great unquarried masses of rock that would be wholly unsuited to vegetable-life—have, indeed, been exposed for generations without attracting vegetation to themselves; hence, so far as present purposes are concerned, the obvious lesson is of a negative character—the what *not* to do in the case.

Too Much Rock and too much exposed are some among the chief of the glaring errors of rock garden construction to-day. They are common in the exhibition arena, and fast becoming so in gardens. That is to say, while the more grotesque errors of the so-called rock gardens of the past are being rapidly discouraged, there is still the danger of not a few rock gardens becoming all rock or a near approach thereto. This could never happen did the operator keep well in mind this fact—that the primary objects of a rock garden are that it be endowed with vegetable-life, that it be both an ornament and a thing of utility as well. Hence we must of necessity avoid the continuous wall-like structure or arrangement—the unyoked savagery of Nature—as unfitted to our purpose. Far too many artificial rock gardens err on the side of pretentiousness; they are too massive, too continuous, and, worst of all, are in this form forced under one's very nose—in other words, they are brought too near to the observer.

The Best Teachings of Nature in such matters—best because embracing a graceful contour with utility—are the teachings of our own hillsides. Here, in touch with the rolling bank—sculptured and fashioned by a thousand years—we see all that is good: the occasional boulder, the projecting ledge, the outcrop rock, nearly hidden from view it may be by the constantly moving *débris*, yet invariably disconnected, and ever suggestive of its possibilities for those who have eyes to see. It will be seen, too, that these rocks also invariably “lie to the bank,” arresting, as it were, the downward progress of seed and soil, and, while playing the part of receivers and retainers of moisture, also by their lie directing it at once to the roots of the plant. Hence their teaching value is enormous.

To fully comprehend all such teaching conveys is to grasp the first great fundamental principle of rock-building; to ignore it would be but to hopelessly flounder in the dark, and always with “rocks ahead.” In the end the best results are secured to our gardens by modifications of Nature's own, adapting them always to circumstance and environment. On the other hand, a mere slavish imitation of the unquarried rock masses would be wrong from every gardening point of view, and more particularly from the utilitarian standpoint. Such arrangements, however, are a thousandfold worse when the rocks are made to recede with step-like regularity and precision till a certain pinnacled summit crowns the whole and demonstrates both its crudity and inutility.



THE GRASS OF PARNASSUS. A BEAUTIFUL BOG PLANT, NATIVE OF BRITAIN.

The Disposition of the Rocks is, naturally, a matter of importance, though in the space at my disposal it cannot be here discussed in detail. Moreover, such things will of necessity have to bear some degree of proportion to the whole. For example, a rock and water garden of an acre or so growing out of a natural dell or declivity in the land would lend itself to a type of treatment impossible in the case of an elevated one-sided bank. In the former the rocks might with advantage crop out here and there in groups on the higher portions of the quite necessary grassed banks, and, intelligently treated with shrubs—*Yucca*, *Berberis*, *Cotoneaster*—would be in perfect harmony

with the whole. On the other hand, a similar arrangement in a rock garden of the banked style would be incongruous, and as such to be avoided. At the International Show at Chelsea in May last one of the most effective and pleasing of the many rock gardens was also one of the simplest. The stones or rocks employed were quite on the small size, and no attempt was made to make them appear what they were not. The rocks, comparatively, were few, and, being weathered and grey, were not glaring to the sight. They were buried, too, and, as in Nature, largely hidden from view, and their setting was such that the whole might have been taken from some hillside *en bloc*. It might have been there always, so restful and pleasing was it. In short, the whole secret of its success

lay in the disposition of the rocks themselves. In the case of larger boulders being employed, more building would be necessary; but even so there would be no occasion to lose sight of the principle involved. In the disposal of the rocks, one cannot refrain from touching upon some of

The Great Errors noticed from time to time. Elsewhere in this chapter I have directed attention to the lie of the rocks in Nature and commented on the value to the plant of this natural dip *into* the bank. Frequently, however, the exact opposite is seen, and where the rocks are of any size, the absurdity and futility of the setting are at once apparent. Stones or rocks having an inclination down the bank only rarely become garnished by moss, and the lesson is an obvious one. Such rocks generally are impossibles; that is to say, they collect neither *débris* nor soil, the moisture of dew and rain is immediately carried away, and, save for the covering of some long, trailing subject, would ever remain unfurnished. Obviously, then, they are wrong. Equally wrong, too, is the naturally-disposed rock whose toes persist in exposing themselves to view, thereby creating a vacuum which should not exist. In Nature not only is the base of the rock obscured from view, but the crumbling rock and *débris* are so banked up and associated therewith as to constitute it an ideal place for colonising the choicest of plants, which the informal outline will render into the happiest of groups. Here, indeed, the operator may copy Nature to the full, and in so doing will never err. E. H. JENKINS.

(To be continued.)

THE GRASS OF PARNASSUS.

(*PARNASSIA PALUSTRIS.*)

The Grass of Parnassus belongs to a small family of bog plants which have their head-quarters in the Himalayas. In this region there are some eight species to be found, including the largest member of the whole genus, *P. nubicola*. This species has been grown in gardens from time to

time, but is not a common plant. It is found at elevations ranging from 6,000 feet to 12,000 feet, and grows to a height of nearly two feet, with greenish white flowers. Several species are found in America, of which three are sometimes met with in cultivation. *P. asarifolia*, with Asarum-like leaves and greenish white flowers, is a distinct little plant. *P. caroliniana* is one of the best, growing 18 inches high, with large leaves and beautiful white flowers veined with green, sometimes $1\frac{1}{2}$ inches in diameter. *P. fimbriata*, of similar habit and stature, has white flowers, with a fringe of white hairs at the base of each petal. Our native Grass of Parnassus (*P. palustris*), a group of which is shown in the illustration on page 590, is a charming little bog plant which is well worthy of cultivation. In its natural habitats it has a very wide distribution, being spread over the temperate regions of the northern hemisphere. Throughout Northern Europe and Russian Asia it is found in bogs and moist heaths, but further South from the Alps to the Himalayas it becomes a mountain plant. It is a very easy plant to grow in boggy soil, and fresh seed germinates freely; but it is more at home in the more northern parts of this country. The stems are from 6 inches to 1 foot high, with a single sessile leaf below the middle, and bear a single white flower veined with green lines.

W. I.

THE GREENHOUSE.

THE WINTER TREATMENT OF GREENHOUSE FERNS.

BY far the most commonly grown of the extensive Maidenhair family is *Adiantum cuneatum*, for not only is it a general favourite for pot culture, both as good-sized specimens and as tiny plants in $2\frac{1}{2}$ -inch pots, but its delicately-divided fronds are largely employed for associating with the choicer kinds of cut flowers. It is usually referred to as a greenhouse kind (a most elastic term); but, as will naturally be expected of a native of Brazil, it requires a temperature above that of a structure from which frost is just excluded. Complaints are by no means infrequent of the fronds turning brown, especially during the winter months, and this is in most cases caused by the lowness of the temperature, which brings with it an excess of atmospheric moisture.

In order to keep this species of Maidenhair in good condition throughout the winter months, it will be, of course, essential to have good, well-rooted plants, furnished with firm, healthy fronds. To ensure this, overpotting must be avoided, and the amount of shading must not be carried to excess. Of course, shading is very essential during the summer months, but in autumn less is required, and for Ferns of this class, unless exceptional conditions prevail, no shading will be required from the end of September to the end of February. For the winter a light, buoyant, rather than a stagnant, atmosphere is to be preferred, and the temperature should range from 45° to 50° by night, rising from 50° to 60° by day; indeed, just such conditions as are essential to the production of greenhouse flowers at that season.

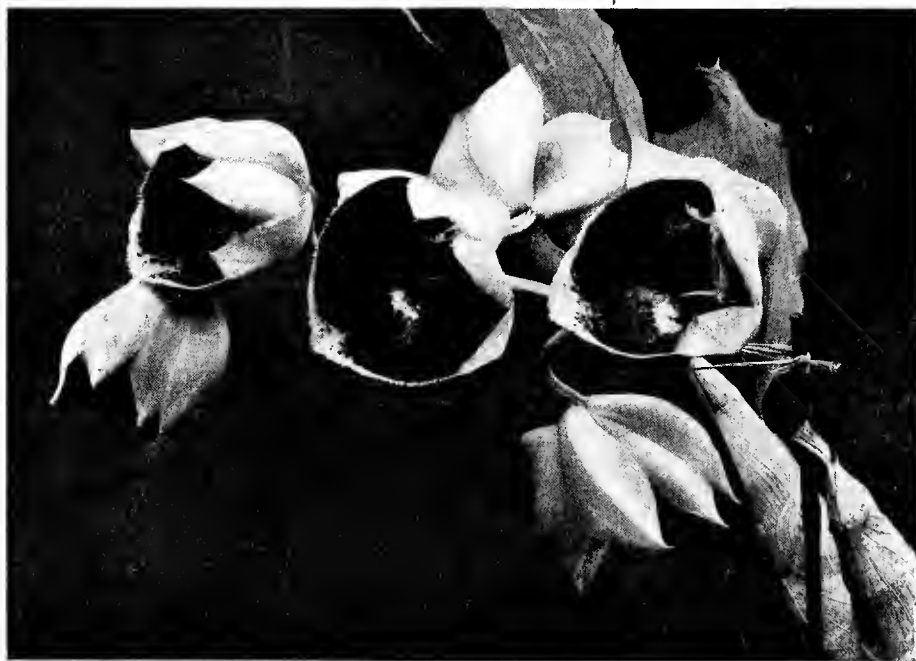
Throughout the winter the water supply must be carefully attended to; that is to say, the plants must never be allowed to suffer from want of water, but at the same time they should not be kept too wet. The browning of the fronds at this season

and the cause thereof have been alluded to, but insects and other pests sometimes give trouble. Slugs are well known as enemies of the Maidenhair Fern, and these are best sought for in the evening by artificial light, as they are difficult to detect in the daytime. It is not the large slug alone, that leaves such a conspicuous trail, which is to be feared; but tiny, dark-coloured ones that can hide almost anywhere are very destructive to Maidenhairs, and so are some very little snails, which often do a good deal of damage before their presence is detected. Cockroaches, woodlice and crickets are sometimes answerable for a good deal of damage, while to the uninitiated the ravages of a small, dark-coloured weevil often prove very puzzling, as the insects pursue their work of destruction by night, and directly a light appears they drop to the ground, where their dark colour renders them difficult of detection. By spreading a white sheet underneath the Ferns, these weevils may then be readily seen when they drop.

of 40° or thereabouts, rising 10° or so during the day, is maintained, there are many Ferns that may be grown. In such a structure Pelargoniums and other bedding plants can be safely wintered.

Prominent among Ferns that will do well under these cooler conditions may be mentioned *Adiantum aethiopicum*, *A. Capillus-veneris*, *A. decorum*, *A. formosum*, *Asplenium bulbiferum*, *A. Colensoi*, *A. bifforme*, *Cyrtomium falcatum* and varieties, *Davallia canariensis*, *D. Mariesii*, *D. bullata*, *Dicksonia antarctica*, *Doodia aspera*, several *Lastreas*, *Lygodium japonicum*, *Microlepia birta*, *Nephrodium molle* and its varieties, *Onychium japonicum*, *Osmunda palustris*, *Todea africana*, *Woodwardia orientalis*, *W. radicans*, and a great number of different forms of *Pteris*, especially the many garden forms of *P. cretica* and *P. serrulata*.

For a greenhouse without any artificial heat, perfectly hardy Ferns are the only kinds that can be grown and depended upon to give satisfaction. As so many hardy Ferns are deciduous, they may



A REMARKABLE ORCHID WITH MOTILE ORGANS (*CATASETUM SPLENDENS IMPERIALE*).

This Maidenhair, and, in fact, most of the others, for protective purposes be set closer together during the winter.

This Maidenhair, and, in fact, most of the others, push up a large number of new fronds about February, and as at that time a great many of the old ones are shabby, it is a very good plan to cut off all the old fronds just as the young ones make their appearance, and thus allow for their unchecked development. These young and succulent fronds are frequently affected by green fly, which may be destroyed by gently vaporising with the XL All Vaporiser. If repotting is needed, it should be done when the young fronds are about an inch in height. The foregoing remarks will apply to the great majority of greenhouse Ferns, of which some of the stronger-growing forms will, if the pots are well furnished with roots, require more water than the Maidenhairs.

The different crested and mossy forms of *Nephrolepis*, which have within the last few years become so popular, will succeed under the same conditions as advised for Maidenhair Ferns, while they will also thrive in a somewhat warmer structure. For a greenhouse where a winter night temperature

for protective purposes be set closer together during the winter.

H. P.

AN INTERESTING ORCHID.

THE Orchid family provides us with many remarkable plants, and of them the *Catasetums* are among the most singular. These plants are certainly more curious than beautiful. As a rule the flowers are of a greenish hue, with thickened, almost leathery segments. The flowers are most interesting, and provided much food for thought to the great naturalist Darwin, who made a special study of the fertilisation of Orchids. The chief interest in the flowers lies in the manner by which the pollen masses are ejected. A close inspection of the flowers illustrated will reveal the presence of two whitish horns seated within the perianth. When the flower is fully developed, these horns act as triggers, and, when touched, the pollen masses concealed within are ejected with considerable force. An insect visiting the flower is naturally startled by its welcome, and flies off with the pollen

masses adhering to it. Presumably the astonished insect does not profit by its experience, and later on pays a visit to a female flower, thereby bringing about cross-fertilisation. It was at one time thought that male and female flowers were produced only on different plants, and so dissimilar are the flowers in some instances that plants of the same species have even been placed in different genera. In recent years, however, it has been proved with plants under cultivation that a plant producing male flowers may on another occasion produce female flowers. The plant illustrated is a fine variety, with an almost black interior to the flowers, known as *Catasetum splendens Imperiale*.

"GARDENS FOR SMALL COUNTRY HOUSES."

This beautiful and comprehensive work brings home to one very forcibly the extraordinary



IN A GARDEN AT FOUR OAKS.

vigour of the modern movement in garden design, of which one of its authors must surely be looked upon as the pioneer. How short a time it seems since that delightful book, "Wood and Garden," appeared, followed by others equally refreshing and full of interest. To that series of works may be ascribed very largely the awakened love of garden design which makes the book we have before us possible.

The small garden is a thing which has practically only come into life during the last fifteen years, and is now so general as to have found a hold even in that stony ground mind of the "speculative builder." The serpent path and kidney-shaped "bedded-out" horror are things of the past—while the man or his wife who leave their garden to the whims of the hired man dare not confess it. It is acknowledged once more

that the house and garden should be part of the same scheme, and in consequence the designing of the garden has become very often the work of the architect. The present work can, of course, only give examples of a very few of the army of men who are doing splendid work all over the country, and it speaks well for the enthusiastic spirit of the profession that its members have so widely and successfully taken up this revived branch of their art. It is to such men, great architects as Philip Webb and Norman Shaw, that we must be grateful for this, and, in remembering them, associate Miss Jekyll's collaborator, Mr. Lawrence Weaver, to whom so much is owed for the magnificent work he has done, by criticism and explanation, in *Country Life* and elsewhere.

In the volume under review we have 308 illustrations, all of interest and of a standard we have learned to expect from this source. I mention these first as one is led to turn from page to page

with pure enjoyment before one can settle down quietly to read. Gardening, like domestic architecture, is suffering at the present time from a contagious disease, which takes the form of a persistent striving after "features," all of which must be antique, quaint and picturesque. Nothing is left alone; at every point and corner are details put together without rhyme or reason, regardless of locality and frequently of construction. And it is with this in view that much excellent advice should be sought in "Gardens for Small Country Houses"—and it is hoped will be taken. There is a great temptation to the unwary on looking through these fascinating pictures to take one bit here and one there and use them irrespective of the whole. Modern facility of transit is responsible for much that is wrong—it is no longer a matter of great difficulty or expense to obtain stone in a brick country or any other

material equally foreign, the difficulty being rather that of discerning that which truly belongs to the immediate neighbourhood.

There are twenty-one chapters, each dealing with a definite phase of garden design, and running through all is the note of that care and consideration which must be employed by those wishful of making their garden a place of peace and beauty. This end can never be reached by the indiscriminate choice of a series of features, no matter how beautiful they may be individually, if they do not form a part of one general scheme.

To quote one of the many things to be read and taken to heart: "When the site is a bare field, or any place without individuality, the designer has a free hand, but will be wise in choosing something that will be definite, so as to give that precious quality of character. It can only be created by simplicity of aim; by doing one thing at a time as well and distinctly as possible and so avoiding complexity and confusion."

The "free hand" with no lead given to it by natural difficulties to surmount is probably the most difficult of all problems to solve; it will, however, be surprising to the layman without previous experience how many possibilities and variations of levels will be discovered in an apparently flat, uninteresting piece of ground after it has been carefully surveyed and drawn out, the first essential step to the planning of a garden. Many gardeners are needlessly afraid of attempting to make a plan. Where a survey of the particular piece of ground is not obtainable from any other source, it can nearly always be traced out upon the 25-inch ordnance map, and the subsequent planning out to scale of the simple scheme correctly enough for ordinary small garden work is largely a matter of common-sense. The gift of visualising a scheme without the aid of a diagram to keep thoughts and ideas coherent is a very rare one. The many excellent plans and diagrams given in this book are so clearly submitted to the reader that they will do much to teach the necessary part of the work. The instructions given for the building of dry walling leave nothing to be desired. In dry brick walling stability is difficult to attain, and I have found it well to build the bottom and top three or four courses in mortar. This adds very considerably to the strength of the wall without noticeably differing from the rest if the joints are well raked out. Where a "battering" retaining wall of any considerable height is to be built, it adds to the effect and convenience to break the slope halfway up with a narrow pathway, say, 14 inches to 18 inches wide, reached by steps at intervals of the same width. The one I have in mind was originally built as a Strawberry-bed, "headers" being left out every third course about 18 inches apart—flowers now take the place of the Strawberry plants and the effect is delightful. I was left puzzled by the dictum on page 249: "In every case the rock garden should be as far as possible from the dwelling-house," remembering with pleasure, as I do, more than one entirely satisfactory rock garden in the closest proximity to the house overlooked directly from sitting-room windows. But this and a depreciating reference to "random walling," with which I do not agree, are small matters.

The book is one of those rare and happy works which will be a valuable text-book and reference on all questions of garden design, both for professionals and amateurs, and a joy to anyone who wishes to spend a quiet hour in a garden atmosphere.

MAXWELL AYRTON.

GARDENING FOR BEGINNERS.

FRUIT TREES IN TOWN GARDENS.

IN this article my plea is not for Roses, although I grow them, but for a branch of gardening which the town man with a garden seems somewhat reluctant to take up. He can grow Roses, Sweet Peas, Carnations and many other beauties of the floral world up to exhibition standard, perhaps; but if he were told that certain varieties of Apples and Pears could also be grown, and that these might reasonably be expected to far exceed in size and quality the fruits usually seen on old trees in country orchards, he would probably doubt it. Yet such is the fact. All my trees are grown in a town garden, which is nearly a mile from the nearest open country, and receives its full share of the usual smoky atmosphere of a large town. The Apple trees are grown as bushes on the Paradise stock, and the Pear is also a bush on the Quince.

Eight years' experience has shown me that the trees, in order to grow and bear well, must be given as much space to themselves as possible (at least 10 feet to 12 feet between them). If this is not done, they fall an easy prey to insect pests, and become "drawn" in the struggle for existence in much the same way as a box of seedlings which has been sown too thickly.

Manuring, though desirable, does not seem to be of such importance in a town as keeping the soil sweet and in good condition. Insect pests are quite easily kept at bay with a good syringe and with no more costly insecticide than clear water. This may seem a rather bold assertion; but I have frequently found, to my very great satisfaction, that American blight and other insects which live in colonies gain no foothold among the trees when a good syringing of the leaves and stems was given once or twice a week and using water only.

I have also found that it is a mistake to grow other things in the space occupied by the trees. One of the easiest ways of keeping the soil open to atmospheric influences is by hoeing, and this cannot be done effectively if the ground is occupied by other plants.

Worcester Pearmain is a most reliable Apple to plant anywhere. It seems as natural to look for Apples on a bush of this variety as it is to look for berries in the hedgerows in autumn. Lane's Prince Albert is also a sure cropper, and, given only the coolest room available in an ordinary dwelling-house, the fruits will keep well till spring. The ideal conditions for Ribston Pippin were provided by the exceptional heat and sunshine of last year. The crop this year, consequently, was much larger than might have been expected. Stirling Castle is a variety which flowers abundantly,

and usually sets a very large number of fruits. The growth of the tree, indeed, will be retarded unless thinning is resorted to. Irish Peach and Newton Wonder also do well with me. Both Pears and Apples this year flowered very much earlier than usual in this district, but the former suffered somewhat from the frosts of mid-April.

3, Ash Grove, Hull. W. H. BOLTON.

A USEFUL RACE OF DECORATIVE CHRYSANTHEMUMS.

THERE is no better type of Chrysanthemum for the amateur to cultivate than the decorative. Dwarf,

but there are more recent acquisitions that have originated as sports from it. Notably there is White Caprice, or White Cap as it is better known both in gardens and in the market. A fine bushy specimen, as broad as it is long, is illustrated on this page. Here a dwarf plant is depicted at its best, and provides a good idea of what the amateur should aim at in cultivating this useful race of the Chrysanthemum. There is a more recent variety, known as Yellow Cap or Golden Cap, of precisely similar habit, and one which flowers with equal freedom, producing a mass of rich golden colour. The last-named variety was introduced a year ago, having occurred simultaneously as a sport both with Messrs. Wells and Co. at Merstham and with Messrs. James Veitch and Sons in their Feltham nurseries. Chrysanthemum sports, it should be added, have a peculiar way of occurring in different places in the same season.



A WELL-GROWN SPECIMEN PLANT OF CHRYSANTHEMUM WHITE CAP.

IS SAWDUST INJURIOUS IN HORTICULTURE?

THERE seems to be a widespread prejudice against sawdust or, at any rate, contempt for it when used as a manure. American gardeners are like English ones in this respect, it seems, and so three years ago they started experiments to try to justify their point of view. These have been continued for three years on a large scale on greenhouse plants chosen for the purpose. Perhaps this was because they are more delicate than outdoor plants, or because conditions could be better controlled. Anyhow, the results were somewhat extraordinary, and do away with any ground for suspicion, it would seem, against this cleanly material. It cannot be denied, however, that sawdust is nearly useless as a source of plant food, and therefore it is matter for surprise that when an average was struck for the three years, sawdust actually came out top and gave slightly more blooms than the other litter which was tested against it. This was straw or

bushy plants make a magnificent show in the greenhouse or conservatory at this time of year, and they may be cultivated by the veriest tyro. Such plants require occasional stopping in the growing season until the end of July to induce uniform and well-balanced growth. Disbudding is likewise necessary before the flower-buds show colour, while throughout the cultivation, from the time of the first potting until the flowering, each plant needs plenty of room from its neighbour in order to make the dwarf, bushy growth that is so very desirable. Of the varieties suitable for the formation of dwarf flowering plants, it is questionable if any are better qualified than either the time-honoured Caprice du Printemps or any one of its many varieties. This is one of the oldest varieties in cultivation,

chopped Maize stalks, superior stuff as regards plant food, surely, to sawdust. Cow-manure was chosen in each case, and was used by itself as a further source of comparison without any litter at all. Roses, Chrysanthemums, Sweet Peas and Carnations, manure-loving plants, were the ones chosen, and we learn that no harmful effect at all could be traced to the use of sawdust. This is curious. Can it be due to the slightly antiseptic properties of sawdust, which kept injurious bacteria at bay? Pyroligneous acid may be of use in this way. It could not have contributed even to the humus of the ground in the same way as the other litter, for it did not decay before use, and possibly it was this comparative absence of fermentation that effected the results mentioned. T.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Chrysanthemums.—In common with other hardy flowers, these may now be cut down almost level with the ground. The stools will go through the winter unharmed; but if it is desired to propagate from them, I prefer to lift the stools and place them under a light in a cold frame in soil. Spring cuttings as they form may be easily removed and placed in pots or boxes to strike.

Oriental Poppies.—These are charming plants for the herbaceous borders, and are particularly suitable for shallow soils and otherwise dry borders. Planting may be done at once.

Christmas Roses (*Helleborus niger*).—The plants will soon be throwing up their blooms, and if these are wanted in advance of those out of doors, a few clumps may be lifted and placed in quite a cool house and the roots covered with soil, or hand-lights may be placed over the clumps, which will prevent the blooms from getting splashed with the rain and dirt.

The Rock Garden.

Planting Shrubs.—Any alterations or additions to the shrub-life of the rock garden may now be successfully undertaken when the weather is open. Shrubs play an important part in furnishing and providing backgrounds and shelter for some of the less hardy plants that find a home there. These are apt to become too large, however, and, if possible, only include those of slow growth and generally of spreading, dwarfier habit.

Hardy Heaths.—The many varieties of *Calluna vulgaris* and *Ericas* form excellent subjects for providing a touch of colour at various seasons, while their evergreen foliage is at all times attractive. The ground for these should be devoid of lime and well enriched with plenty of decaying leaves or peaty growth, when they will form excellent subjects. A garden devoted to these and planted in irregularly-shaped beds is a feature where it can be carried out.

Plants Under Glass.

Violets.—The plants in frames or heated pits for providing winter blooms must be kept as cool and freely ventilated as possible, and whenever the weather is mild enough, remove the light entirely. Aerate the surface soil between the plants, and if they are well established, give them a sprinkling of Clay's Fertilizer or some other suitable plant food and water in. Watering should be carried out on a mild day before noon, and the lights well tilted so that the growth dries before night. Remove any runners from the plants.

Violets in Pots.—These are an attraction to the greenhouse, thrive well in an unheated structure, and may be utilised for room decoration. Give the plants a little manurial assistance, and see that they are kept supplied with sufficient moisture.

The Hardy Fruit Garden.

Nuts.—There are many gardens where these could be planted with advantage, and if a little attention is given them, excellent crops are produced from quite convenient-sized bushes. Both Filberts and Cobs, whichever are preferable, may be planted in variety, and where both are included, finer crops are obtained, due to better pollination, I think. Choose well-drained soil, and not too heavy for preference, a sunny bank suiting them admirably, or they may be planted in the orchard in an open position. Keep the bushes free from suckers—these, if cut out during the winter, make excellent supports for plants when tied up in different lengths and placed on one side—and avoid overcrowding of the growths. Some people, when the female flowers are open, place or shake over them the catkins of the common Hazel.

Raspberries.—The quarters of this crop may be cleaned over now and any superfluous suckers taken up, and, if necessary, new plantations made on well-prepared ground that has been well enriched with manure. Raspberries should be planted in the most convenient manner, so that protection can easily be afforded when in fruit. This is best done either by planting in rows and training the growths in a slanting direction to wires stretched from stout posts, or by planting in clumps at intervals

and the growths tied up to a stout stake. The former has much to recommend it, and when duly thinned, equalised out and tied up, splendid crops may be obtained. Give a good mulching of decayed manure over the roots.

Fruits Under Glass.

Cleansing of Fruit-houses.—In addition to the thorough washing of fruit-houses, particularly the inside of both woodwork and glass, it is of paramount importance that the walls be well lime-washed or treated, as the case may be, so that any insect pests that may be lurking in the crevices are destroyed. The hot-water pipes will be considerably improved in appearance by a coat of black, nothing being better than lampblack and oil; this, though perhaps not quite so lustrous in appearance, does not give off offensive smells.

The Kitchen Garden.

Early Peas.—Where ways and means exist, excellent pods of Peas may be obtained in May by sowing seeds now in large pots or in cool houses in borders. Use a good loamy compost, to which add some Mushroom-bed manure and bone-meal, and see that the pots are well cleaned and drained. Nine-inch or 10-inch are the most suitable sizes, and for a start only half fill with the mixture. Sow as thick again as it is intended the plants shall remain, and place in a cold frame to germinate. Coddling must never be permitted at any time, but give plenty of air, and when germinated thin out to five or six plants and place a neat stick to each.

Spinach.—This crop is looking well this year, and the latest sowings have made good progress. Keep the soil between the rows hoed with the Dutch hoe, and give a sprinkling of soot. Remove by hand any weeds between the plants. See that the seedlings do not become overcrowded, but avoid thinning too severely.

Frames containing Lettuce, Endive and Parsley should be freely aired during mild, open weather, but have plenty of protecting material handy in the event of frost.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Frame Protection.—It is probable the winter may be a severe one, and though many of the plants passing the winter are newly-rooted cuttings and hardy, long-continued frosts are not beneficial. Dry straw placed above the inmates of cold frames I find a very efficient method of protection, the glazed lights keeping the straw dry and always frost-proof, while even if a foot thick it does not wholly exclude light.

In Case of Frost.—The inexperienced are very apt to admit air to frames after removing coverings on the appearance of a change after frost. This should never be done until the signs of a permanent change are unmistakable, vicissitudes of temperature being more harmful than a very low one; nor should the coverings be removed too soon. Even in frosts of only a few days' duration it is best to let the coverings remain all the time.

Frost-bitten Plants.—Some—*Calceolaria*, for instance—may be so severely frozen as to be killed to the soil-level. The plan to pursue is to keep the plants dry till spring-like weather comes, when, if the soil is dry, as it ought to be, growth will in all probability be pushed from underneath, the soil being a fairly good protective medium. *Calceolaria amplexicaulis*, now so deservedly popular, in no case should be left in cold frames over the winter.

Tender Plants.—*Ageratums*, *Lobelias* and some others are somewhat difficult to winter safely. The proper treatment is to keep them gently moving, for if kept too cold or too wet they die. If too hot they sometimes die, and, if not, become so weak as to be of slight utility for cutting purposes in spring. *Geraniums* should be kept cool and perfectly dry, but not roasted above the hot-water pipes, as we sometimes see them.

The Shrubberies.

Leaves.—The foliage of most trees and shrubs fell much earlier than usual this year, and a month

ago we had the shrubberies roughly cleaned, also the lawns. In weather unsuitable for ground-work they should have a final cleaning for the season, preserving the dead leaves for top-dressings, manuring or leaf-soil. The opportunity may be taken to prune those shrubs needing thinning, cutting out dead wood and removing branches broken by autumn gales.

Surface-dressing.—After a time shrubs become weakened and unhealthy for want of nourishment. Material from the compost heap or decayed vegetable mould has a beneficial effect if spread 4 inches to 6 inches thick above the rooting space. Frosty weather should be taken advantage of to wheel or cart the material on to the ground.

Coloured Shoots.—The value of these in winter is very great. The Rubi afford a good example. The present year's growth alone should be left in pruning, when the effect will be considerably improved. One of the best is *Rubus phoenicolasius*, which is a rich brown, shining in sunshine, but always effective. The white-barked species are also very telling. Dogwoods, *Prunus cerasifera*, *Corchorus japonicus*, *Ribes*, *Leycesteria* and *Deutzia* afford good material for decoration, but the shrubs which provide the shoots should not be severely thinned, else they lose their effectiveness.

The Fruit-Houses.

Vines.—Where Grapes are wanted in May and June, the viney should now be closed down and the atmosphere kept pleasantly soft without being warm. If part of the roots are outside, means to protect them from cold and too much wet should be taken, though the advantages of having all the roots inside and under complete control are so great that early vineeries would be much better arranged in the latter way.

Lady Downe's.—The very late Grapes should now be perfectly matured, and while they hang on the Vines the vineeries should be kept perfectly dry and the temperature as steady as possible, ranging about 45° to 48°. Alicantes are at their best now, and are apt to depreciate in the course of a few weeks, though they keep in good condition for a long time when bottled.

Peaches.—If the foliage has not all fallen, it may be lightly switched with a Birch broom, moving it in the direction of the growth, when most of it will come off. Any left on the tips of the shoots may be taken as evidence of unripened wood, which should be removed by pruning. If the border inclines to dryness, apply water—manure-water preferably—in moderate quantities, bud-dropping being attributable to winter drying of the soil. Ventilate as much as the weather will permit.

The Plant-Houses.

Begonia Gloire de Lorraine.—Plants in full flower will do quite well in a cool house not over-ventilated. The flowers stand much longer in such a structure than in a stove, where later batches should still be kept. It is a capital house plant, and will stand seemingly unaffected for a few weeks, but it is far preferable to change plants at frequent intervals. They require frequent watering in hot apartments.

Cyclamen.—Young plants have been rather troubled with mite, which deformed some of the flowers. Repeated applications of nicotine, vaporised, are essential whenever this appears, and the centres where the buds cluster, as a further preventive, may be dusted with Tobacco powder.

Primula malacoides.—Late-sown batches now throwing flowers should be afforded just a little warmth, else they are very slow in coming on, and the foliage and flowers seem to be somewhat less sweet when in a perfectly cool structure than in one slightly warmer. Well-diluted manure-water is of much value, and an occasional pinch of sulphate of ammonia, but only a pinch, has a very gratifying effect.

Primula obconica gigantea.—This plant is now so improved as to be indispensable alike as a decorative pot plant and as a cut flower. The colours are perfect, and the flowers have the additional advantage of remaining fresh for weeks—three at least—in a cut state. The plants must be kept slowly growing all along, and be treated to manure from time to time to keep the foliage a deep green.

R. P. BROTHERSTON,
Tynninghame, Prestonkirk, N.B.

**ANSWERS
TO CORRESPONDENTS.**

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

TO TRANSPLANT AZALEAS AND WATER LILIES (Hex).—Azaleas may be transplanted at any time between the present and the end of March, when the weather is open; but do not undertake the work when there is any sign of frost. Be careful to plant firmly, and keep the upper roots near the surface of the soil. Water Lilies may be planted during February and March. A good time is when the young leaves are showing signs of starting into growth. Plant in baskets, using loamy soil, unless the water can be let out of the pond. If that can be done, mounds of loam may be formed and the Water Lilies be planted in the ordinary way. Baskets are better than casks for the purpose.

HERBACEOUS BORDER GROUPING (M. S. W.).—The really effective way of grouping in such a case is that of arranging a number of plants over a rather large area of ground, each group of about three feet across. For example, taking a group of Michaelmas Daisies or of Phloxes, you might arrange six or nine of the latter and a dozen of the former, and more or less of other plants, according to their habit of growth and root spread. In this way your 8-feet-wide border might contain, roughly, three lines of groups in the longitudinal section, irrespective of any marginal plants that might be used, the third, or front, group being somewhat smaller than the rest. All the groups should be of irregular outline and alternate one with the other. By this arrangement a maximum display is obtained with a minimum of space. Of such plants as Phloxes, Heleniums, Pyrethrums, Kniphofias, Sunflowers and Michaelmas Daisies, small plants comparatively only should be used.

PLANTING HERBACEOUS BORDER (G. B. R.).—A border of 8 feet wide might, for convenience sake, be roughly divided into three informal lines of groups running longitudinally the whole length of the border. To each of the groups in the two back lines a space of 3 feet each should be allotted, thus leaving a 2 feet front for smaller groups of plants. In the back lines the groups should alternate one with the other, which is not only convenient for purposes of display, but as a ground covering idea has much to commend it. In this way Sunflowers, Delphiniums, Hollyhocks, Michaelmas Daisies, perennial Peas, Heleniums and other plants of like stature would appear in the background, with Phloxes, in several distinct shades, Peonies, Gaillardias, Campanulas, Anchusa, Flag and other Irises, dwarfier Delphiniums, Papaver, Scabiosa, Lilies of half-a-dozen sorts and the like in the second row. In the front line of groups, which, if possible, might also extend as a margin, Pyrethrums, Columbines, Aster Amellus in variety, Campanula carpatica, Heucheras, Primulas, Statice, Rudbeckia, Stokesia, Pentstemons, Lychnia Viscaria fl.-pl., Geums and much besides could be utilised, the immediate front being confined to Aubrietias, alpine Phloxes, Mossy and other Saxifrages, Pinks, Hepaticas, Adonis and dwarfier Harebell, Campanulas pusilla, p. Miss Willmott, pulla, pulloides G. F. Wilson and so forth. In planting, three or five examples—in some instances less—would constitute a group, save for the front, where a carpeting arrangement would be best. To secure a good effective display, such a border should be arranged from a working plan so as to avoid flashing.

THE GREENHOUSE.

VENTILATING A GREENHOUSE (M. E. L.).—You ask whether the ventilators of the cool greenhouse should be opened indiscriminately in all weathers? Our answer is that it depends upon the season of the year; but during the summer months a certain amount of air should always be left on. The Geranium and Heliotrope, which do badly, both do well out of doors during the summer; hence it is evident that their weakened state and poor condition is caused by an insufficient amount of air and light. If you attempt to grow them under the shade of the Vine, a good deal of the trouble may be accounted for in this way. Much of the non-success in plant-growing indoors is caused by coddling them too much, perhaps allowing the house to become too hot and dry, and then giving a lot of air all at once so that the plants get a decided shock.

ABOUT CHRYSANTHEMUM BUDS (G. D. R.).—In a dull, cold summer, such as we have experienced this year, many varieties of Chrysanthemums, when treated for the production of second-crown buds, will bear terminals. The very hot period earlier in the season prematurely ripened the wood of many varieties, and these persistently showed flower-buds in the summer-time. You may treat the plants in a similar way for several years, and if the seasons are normal the proper buds will form. We presume you pinched (stopped) the shoots to produce the second crowns. If not, there would naturally be the three breaks, the break, the first crown, and then the terminal with the surrounding buds.

ROSE GARDEN.

WICHURAIANA ROSES TO PLANT (H. E.).—Both Leontine Gervaise and René André are thoroughly good in every way, but they resemble each other rather much. If you desire two quite distinct, we would recommend Alberic Barbier and Leontine Gervaise. The rugosas Conrad F. Meyer and Rose à parfum de l'Hay are both very good.

WICHURAIANA ROSES FOR TOWN CULTURE (H. E.).—There is hardly enough distinction between Delight and Hiawatha. We should advise you to have Excelsa, and of your other list select Leontine Gervaise, Gardenia instead of Shower of Gold, and Elise Robichon. These are very lovely and all distinct, and would stand a rather bad atmosphere the best.

PREPARING BEDS FOR ROSES (F. D. J.).—We advise you to have the proposed beds dug out to a depth of 3 feet. Put on one side the top soil if it is of a loamy nature, and keep that which is very gravelly by itself. The beds should then be refilled with some good top soil, either taken from another part of the garden, preferably where it has been enriched with manure for vegetables, or imported from some dealer in loam in your neighbourhood. As the new soil is put into the beds, mix with it that removed from the surface, and also some well-rotted manure at the rate of one part of manure to two parts of soil. You should also add to the soil, about two feet down, a dressing of basic slag at the rate of 6oz. per square yard, and just fork this into the soil. Fill the bed about one foot higher than the ground-level, in order to enable it to settle down to its correct level. You can plant the Roses after the beds have been prepared two or three weeks, choosing a fine day for the work, and as you plant each Rose bush or standard, scatter a handful of bone-flour around the plant and just beneath the surface soil. Sweet Peas will also thrive well in soil thus prepared. Sometimes soil, "top-spit" it is called, may be purchased from builders where new houses are being erected. That from a meadow would be ideal material, and if you have the turf, put this grass downwards into the beds.

KITCHEN GARDEN.

INJURY TO CABBAGES (Enquirer).—The plants are attacked and destroyed by Cabbage-root maggots. Try nitrate of soda and Vaporite or some other soil fumigant; but the pest often disappears without any apparent reason.

CELERY LEAVES DISEASED (E. G. and Others).—The Celery is attacked by the fungus Septoria petroselinii A. Pil. Diseased foliage should be removed and the healthy parts sprayed with Bordeaux mixture or potassium sulphide. None of the refuse from the Celery should be put on the rubbish-heap, but it should be burned. Next season grow the plants as far as possible from the part where they are now growing. It is a disease which is liable to spread exceedingly quickly.

MISCELLANEOUS.

VARIOUS QUESTIONS (Mauby).—1. The maiden loam is best stacked in the open while it is weathering. It would be apt to become too dry in a shed. After it is fit for use it may be kept for a time under shelter, so that it may be in a friable condition when wanted. 2. Both paraffin and lubricating oil would be likely to interfere with the proper decay of the refuse, such as goes on in a heap and is necessary before plants can make any use of the stuffs locked up in them. It is, therefore, very undesirable for these to find their way into the refuse heap.

NAMES OF PLANTS.—Dolphin.—Linaria repens. There are many species of Linaria, and L. repens itself varies to a certain extent.—J. J.—Tolmie Menziesii.—F. J., Gloucestershire.—Yes; Kniphofia aloides.—Iris.—Kniphofia Uvaria grandiflora and K. Saundersi are both good and reliable. Flowering season July till September.—Coningsby Hall.—Juglans nigra (Black Walnut).

NAMES OF FRUIT.—J. K.—1, Doyenné du Comice; 2, Marie Louise d'Uccle; Apple Hollandbury.—J. P.—Seedling Apple, a very good cooking variety, but not superior to varieties already in existence.—H. W. C.—1, Beurré Goubaux; 2, Bishop's Thumb.—Woodgate.—1, General Toldken; 2, Josephine de Malines; 3 and 4, Hawthornden, 5, Emperor Alexander.—G. H.—Berwick, Sussex.—1, Cornish Aromatic; 2, Cox's Orange Pippin; 3, Beurré Dumont; 4, Josephine de Malines.—E. M., Richmond.—Rosemary Russet.—G. W. E.—1, Peasgood's Nonsuch; 2, Rambour Franc; 3, Blenheim Orange, well coloured; Pear King Edward.—J. K., Ireland.—Apples: 1, Wintonhill Fillsbark; 2, Flanders Pippin; 3, Gloria Mundi; 4, Ard-Cairn Russet; 5, Wellington Pears: 1, Beurré Biel; 2, Verulam.—E. M. A.—See next week's issue.—C. W. Kitson.—Sops o' Wine.

SOCIETIES.

NATIONAL CHRYSANTHEMUM SOCIETY.

An important meeting of the floral committee of the National Chrysanthemum Society was held at Essex Hall, Strand, London, W.C., on Monday, November 11, at three o'clock in the afternoon. There was a good attendance of members of this committee, and no fewer than forty-three new varieties of Chrysanthemums were submitted for adjudication. A high standard of quality was observed in making the awards, many really good things being passed over. The following varieties gained recognition.

FIRST-CLASS CERTIFICATES.

Enchantress.—A large and refined Japanese bloom of exhibition standard. The petals are long and of medium breadth, twisting and slightly curling, and building a bloom of drooping form. Colour, white, suffused pink at the ends. Late blooms are much better coloured.

Mrs. W. T. Smith.—This is a large, deeply-built incurved Japanese flower of beautiful form and good quality, having broad petals reflexing and incurving at the ends: white. From Mr. A. Smith, Covent Gardens, Rochampton.

Mrs. W. E. Tricker.—Another large, solidly-built incurved Japanese bloom, having fairly broad petals, neatly incurving and of deep build. Colour, deep blush.

Mrs. G. W. C. Drexel.—Although shown in varying form, this is a monster Japanese flower of great refinement. The petals are very long and of medium width, twisting and curling and incurving at the ends, and building a graceful flower of drooping form. Colour, silvery pink. From Messrs. W. Wells and Co., Limited.

Mme. Depree.—This variety was classified as an incurved Chrysanthemum, although the long, pointed petals of medium width incurve in a fashion rather like a Japanese. It is a large flower for this section, and is regarded by market-growers with much favour. Colour, creamy white, tinted blush. From Mr. H. W. Thorp, Worthing, Sussex.

Mrs. J. G. Day.—A beautiful Japanese variety of good quality. The petals are fairly broad and long, pleasingly reflexing and incurving at the tips, building a flower of drooping form. Colour, a very lovely tone of golden amber. Shown by Messrs. H. J. Jones' Nurseries, Limited, Ryecroft Nursery, Lewisham, S.E.

June.—One of the most remarkable of the large-flowered singles extant. The blooms are from 7 inches to 8 inches in diameter, and the long, very broad petals are disposed in most even fashion round a nicely-proportioned disc. There are about three rows of petals. Colour, deep rose, tipped white, with narrow white zone round yellow disc.

Thorp's Amaranth.—A most attractive market variety of Japanese origin. The bloom is of fairly even form, having fairly broad petals neatly reflexing. Colour, deep rosy amaranth, with silvery reverse. The flowers are about six inches in diameter. From Mr. R. W. Thorp.

Ivor Grant.—A superbly fine medium-flowered single having a double row of broad florets very evenly disposed, building an ideal bloom of its kind. Colour, rose pink, with white zone round yellow disc. From Mr. G. Mileham, Emlay House Gardens, Leatherhead, Surrey.

Ravena.—This is a very distinct large-flowered single, having two rows of petals of medium breadth evenly disposed. Colour, chestnut crimson, with yellow zone round deeper yellow disc. From Messrs. Cragg, Harrison and Cragg, Heston, Hounslow.

Bronze Beauty.—A splendid medium to large sized single, having about three rows of petals of good breadth that build a bloom of good form. Colour, rich orange bronze, with yellow zone round disc.

Ethel Mortimer.—Another grand, large-flowered single of superb quality. The blooms are fully 4 inches in diameter, and have from three to four rows of fairly broad petals that slightly recurve in even character and build a charming exhibition or market variety. Colour, clear golden yellow. These two novelties were shown by Mr. Philip Ladds, Swanley Junction, Kent.

COMMENDED.

Cynthia.—For market uses and for bold decorative displays this new Japanese variety is noteworthy. The flowers are about six inches in diameter, the petals being rather narrow, but of good length. Colour, a lovely tone of rich crimson amaranth. It is a flower in the same category as R. F. Felton and Cranford Pink. From Mr. Walter Jinks, Thames Ditton.

Miss Mary Oller.—This is a dainty little single classified as medium to small flowered, of an attractive character, being about three inches in diameter and having three rows of rather narrow petals neatly disposed. Colour, bright yellow. From Messrs. W. Wells and Co., Limited.

READING GARDENERS' ASSOCIATION.

The usual fortnightly meeting was held in the Abbey Hall (by permission of Messrs. Sutton and Sons) on the 4th inst. The president (Mr. F. B. Parfitt, J.P.) occupied the chair, and there was a large attendance, which included the vice-president (Mr. Leonard Sutton). The lecturer announced for the evening was a delegate from the kindred society at Bristol, but at the last moment he was unfortunately prevented from journeying to Reading. His place was admirably filled by a brother Bristolian, Mr. I. House, who is always welcomed by the Reading Association. The subject was "Hardy Perennials." In the first part of his paper Mr. House defined the term "hardy perennial herbaceous plants," and expressed regret that complicity of show schedules were not clear in their stipulations

Bulbous plants should not, in his opinion, be admissible in a class for hardy herbaceous plants, neither should any of doubtful hardiness, nor others treated as greenhouse plants, for the purposes of competitive exhibition. He instanced plants which were not easily propagated, among others commending *Ostrowia magnifica* and giving his experience with it. Another list comprised those which were not generally successful, as *Romneya Coulteri*, supplementing it with cultural details. Mr. House also gave the names of a number of the newer and finer forms of better-known plants, as *Phloxes*, *Pyrethrums* and *Montbretias*. In another section of his paper he gave the names of plants which were undesirable occupants of the herbaceous border on account of their predatory habits. He advised his audience as to the kinds of plants which were best left undisturbed for several years, as the forms of *Aster Amellus*, *Dictamnus Fraxinella* and *Paeonies*, and enumerated others which were better for annual or biennial replanting. Mr. G. Carter, gardener to Mr. S. Griffith, Gordon Lodge, exhibited a very pretty group of *Primula Norton's Giant Pink*, for which he was awarded a certificate for cultural skill.

SANDHURST, YATELEY AND DISTRICT GARDENERS' ASSOCIATION.

THE fourth meeting of the winter session was held in the Church Schools, Sandhurst, on November 5. Mr. F. W. Benham presided over a moderate attendance, when Mr. J. Evans, The Gardens, Snapraills, Sandhurst, gave a most interesting paper on "Roses," dealing fully with the preparation of the ground, planting and pruning. A good list of the best varieties in the various sections was given. An excellent discussion followed, in which many points of interest were raised. At the close a hearty vote of thanks was accorded Mr. Evans for his paper.

WARGRAVE GARDENERS' ASSOCIATION.

THE eleventh annual show (non-competitive) organised by this society in aid of the Royal Gardeners' Benevolent Fund was held in the Woodlyffe Hall, Wargrave, on Wednesday, November 6. It proved very successful, both as regards the quality of the exhibits and the interest taken in the show by the general public, the hall being well filled, during the evening especially. The staging arrangements were superintended by Mr. W. Bazeley, assisted by a strong committee. Instrumental and vocal music was provided during the afternoon and evening, and greatly added to the enjoyment of the visitors to the show. The exhibits were arranged on three tables running the whole length of the hall, besides which the permanent stage was also used for small groups. The ladies and gentlemen who sent exhibits were as follows, the gardeners' names being in parentheses: Sir Charles Henry, Bart., M.P. (gardener, Mr. R. Doe), Mr. A. B. Gill (Mr. Pope), Captain Coleridge (Mr. W. H. Scott), Mrs. Rhodes (Mr. T. Haskett), Mr. G. Stanton, Mrs. Groves (Mr. A. Mackenzie), Mr. E. C. Hansen (Mr. H. Atteley), Mr. Martin J. Sutton (Mr. H. Clark), Mr. G. C. Davies (Mr. T. Tunbridge), Mr. Razeley, Twyford Nurseries; Mr. H. C. Bond (Mr. R. Perry), Mr. R. C. Harrison (Mr. J. A. Hall), Major Bulkeley, D.S.O. (Mr. W. Massey), and the Wargrave Plant Farm, Limited (manager, Mr. H. Richardson).

LIVERPOOL HORTICULTURAL ASSOCIATION.

THIS society held its thirty-third autumn exhibition in the Corn Exchange on the 13th and 14th inst., which fully upheld the high traditions of the city which gave birth to the large exhibition Chrysanthemum. The show under review is credited as being the best autumn exhibition yet held.

Cut blooms possibly form the popular section, which were shown in quantity, and, what is generally recorded of Liverpool exhibitors, no inferior specimens were to be seen. The chief class was won by Mr. C. Goves, gardener to Sir Gilbert Greenall, Bart., Warrington, in which he secured the handsome silver challenge vase, the gift of Sir W. H. Tate, Bart. The thirty-six flowers—eighteen Japanese and eighteen incurved blooms—were greatly admired, and to make a selection we might give: Japanese, William Turner, which secured the National Chrysanthemum Society's certificate for the best Japanese in the show; F. S. Vallis, President Viger, Lady Talbot, Hon. Mrs. Lapes and A. T. Miller: incurved, Mrs. G. Denyer, G. F. Evans, Marjorie Shields, Romance, Mrs. R. H. Hall and others. This exhibitor and Mr. J. Clark, gardener to Mrs. Clarke, Allerton Hall, had many remarkable incurved blooms. The second prize-winner in the "Cup" class, Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., Woolton, had many beautiful incurved blooms. His *Buttercup*, noted for its form, colour and size, easily secured the National Chrysanthemum Society's certificate as the best incurved in the show. This exhibitor had many fine blooms, staged in vases, which many people prefer to the more formal style of arrangement in boxes or on stands. A feature of the exhibition were the sterling exhibits of single cut Chrysanthemums set up in vases with nine blooms in each vase. This section has steadily improved, but the present exhibits easily surpassed all previous efforts. To Mr. Loo Thomson, an enthusiastic amateur of Forbury, much credit is due for his superb display. The varieties that have met with such general approval are *Edith Pagram*, *Snowflake*, *Crimson King* and *Bronze Pagram*. The blooms measure from 5 inches to 6 inches in diameter, and are well adapted for a display in a large room or hall. Mr. G. Haigh and Mr. G. Eaton, gardener to W. Tod, Esq., Allerton, also staged splendid exhibits.

WEST OF ENGLAND CHRYSANTHEMUM SOCIETY.

THIS society opened its annual show in the Guildhall, Plymouth, on Tuesday, November 12. The exhibition proved to be one of the most successful and attractive that have ever been held in the town. This year the Earl of Morley has become the president of the society. The entries were more numerous than in late years, and the competition was very close. The judges often experienced considerable difficulty in arriving at their awards.

The cut blooms were well shown and very numerous. In the first class, for twenty-four Japanese blooms, the first prize was won by Lady Buller. In her stand were good examples of W. Turner, Rose Pockett, Miss L. Baker, F. S. Vallis and Lady Talbot. The same exhibitor also won first prizes for eighteen Japanese and for six Japanese.

In the class for twelve Japanese, the first prize was won by Mr. T. B. Bradshaw.

In the class for twelve vases of single Chrysanthemums, the first prize was also won by Mr. T. B. Bradshaw; but he was beaten for the silver-gilt medal by the winner of the class for single Chrysanthemums in the local class, Mrs. Bainbridge.

The first prize for a group of stove and greenhouse plants was won by Mrs. Bainbridge with a very gracefully-arranged and attractive collection of fine plants. In the centre was a tall specimen of *Arundinaria Falconeri*, and around were grouped *Calanthe Veitchii*, *Cypripedium insigne*, single Chrysanthemums, *Crotoms* in variety, *Salvia leucantha*, *Panax Victoriae*, *Pandanus Veitchii*, *Dracenas*, *Eulalias*, *Dieffenbachias*, *Urcolina pendula*, *Eupatorium micranthum*, *Marguerite Boule de Neige*, *Aralia gracillimum* and *Colens*.

For a group of single Chrysanthemums, the first prize was won by Dr. Burke with a well-arranged group of plants laden with very fresh and well-coloured blossoms.

For a collection of salads in variety, a most pleasing table was contributed by Mrs. Bainbridge, who won the first prize. With its lightness of arrangement and the bright colouring of the Tomatoes and Capsicums it certainly provided one of the prettiest pictures in the show, and it would have been fully equal to winning in London in strong competition. Included in the collection of salads were five sorts of Capsicum, large red and yellow Tomatoes, Grape Tomatoes (yellow and red), American Cress, Australian Cress, Brazilian Cress, Watercress, Mustard, Batavian Endive, Moss-curl'd Endive, Cos and Cabbage Lettuce, Oak-leaved Lettuce, Asparagus-leaved Lettuce, Cucumbers, long and Turnip Radishes, Chinese Cabbage, variegated Chicory, red-leaved Chicory, Witloof, Chervil, Chibbles, Chives and Tarragon.

The nurserymen's exhibits were extremely fine, and contributed very noticeably to the attractions of the show. The Devon Rosery, Tarquay, which was awarded a gold medal, had a magnificent display of fruit, about one hundred and fifty varieties being shown, of which Apples accounted for nearly one hundred and twenty. The Apples were generally wonderfully well coloured and mostly very large in size. Of those more especially noteworthy some of the best were *Gascogne's Scarlet*, *Blenheim Orange* (very deep in colour), *Cox's Orange Pippin*, *Peasgood's Nonsuch*, *Newton Wonder* (excellent), *Bismarck*, *Bramley's Seedling* and *Emperor Alexander*.

The King's Acre Nurseries, Hereford, also carried off a gold medal for a very meritorious display of fruit. The outstanding feature of this stand consisted in several enormous specimens of the little-known Apple *Gloria Mundi*. Among the best fruit on the stand were *Lord Derby*, *Warner's King*, *King's Acre Bountiful* and *Mère du Méoage*.

Messrs. Sutton and Sons showed a first-class collection of vegetables, for which they received a gold medal. The produce was very well arranged and remarkably clean, of splendid quality and entirely free from coarseness. Every variety shown was perfection, and could not have been excelled.

Messrs. Robert Veitch and Son, Exeter, staged a comprehensive collection of plants, and were awarded a silver medal. In the stand were noticed hybrid *Nerines* and *Nerine Bowdenii*, *Cypripedium leucanum superbum*, *C. Acteaus*, *C. insigne punctatum*, *C. fairieanum*, *C. Charlesworthii*, *Odontoglossum crispum*, *O. andersonianum*, *Cattleya labriata*, *Sarracenia exoniensis*, *Zygopetalum Mackayi*, the new *Berberis Wilsonae*, *B. Bealii*, *Grevillea longifolia*, *G. ornithopoda* and a collection of winter-flowering Carnations.

MANCHESTER ROYAL HORTICULTURAL AND BOTANICAL SOCIETY.

THE autumn exhibition of this society was held in the Town Hall under the most favourable auspices. The entries, both competitive and non-competitive, were of a very high order, superior merit being the prevailing note in nearly every section.

Taking the Orchids, which were both numerous and choice, into first consideration, the season's best-known kinds were in evidence, such as *Cypripediums*, *Cattleyas*, *Vandas*, *Odon'toblossoms* and others, charming in diversity of colour, form and variety, and were greatly appreciated by the visitors. The gold medals that were awarded to the following firms were richly deserved: Messrs. J. Cypher, Charlesworth and Co. and W. R. Lee.

The Autumn Queen was in very high form. The exhibit of *Pantia Ralli*, Esq., in the premier class was of high excellence, and fully deserved the leading position. Among his blooms were fine types of *His Majesty*, *Glaucus*, *Superb*, *W. Mease*, *William Turner*, *Willie Rawlings*, *President Viger*, *Purity* and others in the Japanese section, with *Amber Beauty*, *Mrs. R. Judson*, *Boeace*, *G. F. Evans*, *Romance*, *Mrs. B. Haukey*, *Fred Palmer* and *Mrs. G.*

Denyer in the incurved section. Mr. C. Goves, gardener to Sir Gilbert Greenall, Bart.; Mr. C. Jones; Mr. W. E. Wright, gardener to Lord Sheffield; Mr. J. Stoney, gardener to Lieutenant-Colonel J. B. Gaskell; and Mr. W. J. Garner (nurseryman) also contributed many fine stands in this section.

Winter-flowering Begonias set up in large numbers by Messrs. Clibran proved one of the features of the show, with a bank of some thirty feet. The varieties were staged in groups, and perhaps the best of this set of good things were *Clibran's Pink*. Miss Clibran, Mrs. Heal and many others gave proof of what this firm have done by the introduction of these beautiful forms to brighten the winter months. Gold medal.

Fruit had a single representative in Messrs. Dickson, Brown and Tait, who staged a large collection of Apples and Pears of leading quality, well arranged. Gold medal. The secretarial duties and general management of the show were in the able hands of Mr. P. Weathers, and to him and his generous council a deep debt of gratitude is due.

EDINBURGH CHRYSANTHEMUM SHOW.

THE great annual show of Chrysanthemums organised by the Scottish Horticultural Association was held in the Waverley Market, Edinburgh, on November 14, 15 and 16. As might be expected from the increasing appreciation of small blooms in Scotland and their greater value for cutting, in addition to the unsatisfactory season, there was a smaller show than usual, and in the leading class the competition was more limited than ordinary. The cut flowers were, as a whole, of excellent quality; plants were good; and the floral arrangements in the best of taste, as a rule. Fruit was capital, and vegetables were of the usual high quality exhibited at this show.

Trade exhibits added a good deal to the interest and value of the exhibition. As usual, Messrs. W. Wells, Limited, Merstham, exhibited a magnificent display of new and old Chrysanthemums, which were greatly admired. Lady Talbot and Queen Mary were especially good, and the whole exhibit was worthy of the gold medal awarded. Messrs. Wells received awards of merit for Chrysanthemums *Queen Mary* and *Mrs. W. G. Braxall*.

From Messrs. Sutton and Sons, Reading, there came one of their superb exhibits, comprising the finest varieties of vegetables, &c., upwards of sixty varieties being shown in their wonted grand style. A gold medal was awarded to the firm.

Messrs. W. Cutbush and Sons, Highgate, London, received a silver medal for their excellent exhibit of Carnations, among which we noted *King George*, *Mrs. Lucy Mackinnon* and *Hon. R. James*.

The exhibit of Messrs. Young and Co., Hatherley, Cheltenham, who also received a silver medal, contained a number of the best and newest Carnations, among which we observed *Hon. J. Boscawen*, *Duchess of Devonshire*, *Empire Day* and many others of grand quality.

Messrs. Dobbie and Co., Edinburgh, made a fine exhibit, for which a silver medal was given. Their collection of Potatoes was one of great value and interest.

An exceedingly attractive display, though not large, was made by Mr. David W. Thomson, George Street, Edinburgh, who sent a collection of winter-flowering Begonias, which enabled growers to see some of the best of the newer varieties as grown in small pots.

Messrs. John Forbes, Hawick, Limited, set up an exhibit of good Carnations, Begonias, perennial Asters, &c.

The Professional and Civil Service Supply Association, Edinburgh, made an effective exhibit of Grapes, Apples and other fruits.

Mr. H. N. Ellison, West Bromwich, again sent one of his attractive exhibits of choice Ferns—a most interesting and pretty stand.

On the exhibit of Messrs. Fille, Whyte and Co., Edinburgh, there were many very fine vegetables, plants, &c., showing the excellence of the firm's strains.

In the competitive sections keen interest was displayed in the exhibits for the leading prizes. That for the City of Edinburgh Cup and £12 in money was, however, shorn of much of its attraction by the fact that of the three entries only for this season but two were staged, and the disparity between these was very great. Mr. T. Lunt, gardener to Captain Stirling of Keir, the hon. president of the association, was declared the winner, and thus becomes the owner of the cup, which he has now won for three times. He had 138½ points out of a possible 180. The blooms, though very fine, were not equal to those which won the cup in 1911. Out of the fifteen varieties *Mary Poulton*, Mrs. Thorn and William Turner were probably the finest; but good blooms of Mrs. A. T. Miller, F. S. Vallis, *White Queen*, *Purity*, *Maud Williamson* and others were included in this creditable exhibit. The second prize was withheld and a third awarded to Mr. J. Fraser, gardener to Mrs. Simpson, Bonaly Tower, for a nice exhibit, though too small for such a class. Mr. Fraser had 87 points.

A much closer competition occurred in the class for the Scottish Challenge Cup for Scottish growers, and Mr. James Small had a creditable win with a good exhibit which gained 76 points, the highest possible being 90. Mr. R. Mackenzie was only 1½ points behind. Mr. H. M'Skimming, who had 72½, was third; and Mr. D. McLean, Raith, had 71½ in the fourth-prize exhibit. As will be gathered from the number of points, this class also was hardly up to the usual.

For six vases, Japanese, confined to private gardeners and amateurs, Mr. John Waldie, Dollarbeg, was first.

For twelve blooms, Japanese, in twelve varieties, open to all, Mr. Lunt repeated his victory in the premier class. Mr. Small being second.

THE GARDEN.

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NOVEMBER 30, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20 Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Tulip Show in London Next Year.—We understand that the Council of the Royal Horticultural Society will hold a special Tulip show in their hall at Vincent Square during the spring of next year. A considerable portion of the hall will be devoted to these flowers, and the suggested date of the exhibition is the Wednesday before the great spring show at Chelsea. We hope to be able to publish fuller details shortly.

The Grading and Packing of Fruit.—Since our last issue went to press, we have ascertained that the Federation boxes for packing fruit, mentioned by Mr. A. H. Pearson on page 586, can be obtained, cut ready for nailing, from Messrs. G. Monro and Co., Covent Garden; J. A. S. Smythe, Bridge Wharf, Maidstone; and W. and C. Pantin, 147, Upper Thames Street, London, E.C. The last named will not, however, supply less than 1,000 boxes.

The King's Spear.—In the King's Spear (*Asphodelus ramosus*) we have a capital plant for a moist and rather shady place, where this noble subject is seen in perfection. In dry, poor soil it does not increase well, and never shows its real beauty. If planted in good, rich, rather moist loam, it grows to 3 feet or more high, and gives above its long, narrow leaves branching spikes of white flowers. It is propagated by division or by seeds.

National Chrysanthemum Society's Shows for 1913.—The shows to be held by the National Chrysanthemum Society at the Crystal Palace in 1913 have now been definitely fixed for October 1 and 2 and November 5, 6 and 7, and the agreement has already been signed between the society and the authorities of the Crystal Palace. Will other Chrysanthemum societies throughout the kingdom kindly make a note of these dates with a view, as far as possible, to preventing any overlapping?

A Useful Climbing Groundsel.—In the Succulent House at Kew one of the showiest plants at the present time is *Senecio canalipes*, a South African species, which occupies a position on one of the rafters. Of succulent consistency, its long, slender branches attain a length of 15 feet or more, and are clothed with green, Ivy-like, fleshy leaves on stalks 2 inches to 3 inches long. At the present time it is covered with large heads of bright yellow flowers, which appear from the points of the branches. In some instances these inflorescences are as much as 9 inches across, while the individual heads are nearly an inch in diameter, the ray florets being more conspicuous than the disc florets. It is well adapted for planting in a structure where a minimum winter temperature of 40° to 45° is maintained, and is suitable either for a rafter, pillar or trellis.

Chrysanthemum Mrs. Gilbert Drabble.—Our Paris contemporary *La Vie à la Campagne* gives as its cover illustration for its issue of the 1st inst. a gigantic picture of Mrs. Gilbert Drabble, from a photograph of the bloom staged last year at the Paris Show by Mr. Thomas Stevenson, and which was awarded the silver-gilt medal for the finest bloom in the show. There are in the same issue several other reproductions of Chrysanthemums grown by this eminent exhibitor.

The Himalayan Rockspray.—*Cotoneaster frigida*, native of the Himalaya, is a most attractive winter shrub by reason of its bright orange crimson fruits. If untouched by birds, these fruits remain showy throughout the winter, and there are few shrubs that can vie for effect with the well-berried and half-drooping branches of *Cotoneaster frigida*. At this season the berry-crowded branches are particularly fine, making this shrub very useful for grouping in places where late autumn and winter effects are desired.

The Constantinople Nut.—This interesting Hazel, known botanically as *Corylus Colurna*, is producing Nuts with remarkable freedom this year. The Nuts are produced in clusters of usually five or six, and are somewhat smaller than those of the common Wood Nut. There is also a good promise of male catkins for the coming spring, and the young catkins and clusters of Nuts make this tree interesting at this season and at this eventful period in the history of Constantinople. The tree will attain a height of 60 feet, and was introduced from Asia Minor in 1665.

A Beautiful Berried Shrub.—One of the most ornamental shrubs in the garden just now is *Cotoneaster Simonsii*, a fairly common, semi-evergreen species from the Himalaya. Its almost erect, slender branches are thickly clothed with oval-shaped, orange scarlet berries that were highly iridescent in the wonderful sunshine that was experienced in many districts last Sunday. This *Cotoneaster* will thrive in almost any kind of soil, and we have seen it successfully used for a hedge where strict formality of outline was not desired.

The Pyrenean Adonis.—*Adonis pyrenaica* is one of the useful hardy flowers which have never been appraised at their real value. It is not nearly so plentiful in gardens as the Spring Adonis (*A. vernalis*), though it has several good qualities to commend it. It comes into bloom later than its ally of the spring, and is rather taller, growing to 1 foot or 15 inches high. From the root it sends up stems bearing narrow leaves and good-sized yellow flowers, which appear about May. It will thrive in any good loamy soil, and is always finer in one inclining to stiffness than in a light and open one.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

November Rose Blooms.—In a recent issue there appeared a note about the gathering of some good Roses in an Essex garden on November 3. On November 11 in this garden—Ken View, Highgate—twenty four really good flowers of the following varieties were gathered: Richmond, Mme. Abel Chatenay, Dr. C. Hall, D. Page-Roberts, La Tosca, Lady Ursula, Conrad Meyer, Comtesse I. Hardegg and Mme. E. Metz. Such a rich find must have been impossible had it not been for the spell of mild weather we have experienced.—T. C.

Lilium longiflorum.—I was much interested in one of the "Notes of the Week," issue November 16, on the Lilium above named. It is, indeed, an ever-welcome flower, useful for cutting, especially for placing in the tall, trumpet-shaped vases now so fashionable for the furnishing of the greenhouse and the conservatory. Amateur cultivators are very fond of this Lilium, and I would like to refer to the fact that the plants are often sadly crippled when subjected to a cold temperature suddenly after being forced on in a warm house and moist atmosphere in the early stages of growth. Having seen so many fine plants ruined in this way, I would like to warn the beginner against causing such sudden checks to the growing plants.—G. G.

Daffodils in New Zealand.—I have just received from a Colonial customer copies of the New Zealand *Weekly Graphic* dated September 18 and 25, giving an excellent account and particularly good illustrations of the Auckland Daffodil Show held on September 5 last. Judging from the account of the show and the capital photographs reproduced of individual blooms, this go-ahead Colony bids fair to become a formidable competitor of the Old Country. The raising of seedlings, too, appears to be making some headway, and among flowers exhibited at the show may be numbered Trewithiel, Prime Minister, Trafalgar, Aorangi, Tongariro and General Manager. All these flowers were raised by Professor Thomas, and, to judge by the large bunches of Trewithiel and Tongariro, he has evidently been working with the Daffodil for some years. I may add that interesting pictures also appear in one of the papers of groups taken at the National Sweet Pea Society's trials at Sutton and Hinckley, everything being reproduced in excellent form and little trouble being experienced in picking out leading lights of the English Sweet Pea world.—F. HERBERT CHAPMAN.

Charming November Flowers.—Quite near a path in the alpine or rock garden the lovely dwarf-growing *Polygala Chamæbuxus purpurea* and *P. C. grandiflora* are just now in full flower, and are very beautiful for the dull month of November. The first named soon grows from a small plant into a good mass, and may be made use of in many parts of the garden, as a carpeting, for instance, to Azaleas and Rhododendrons. It being an evergreen, it is of more interest among deciduous Rhododendrons. *P. C. grandiflora* is also quite hardy, and the flowers are creamy white and most freely produced. Each resembles a small Sweet Pea. Neither of these grows more than about nine inches high, so that they are good plants for small as well as large gardens. They are also very easily propagated by layers or cuttings, and soon make nice sized clumps. They will grow in nearly any soil in which a little fine peat and leaf

soil has been incorporated. The drainage should be made good and the plants confined to the shady side of the border or alpine garden, or wherever they are planted, as they love shade (not overhead) and moisture. In February and March, when blooming is over, it is well to protect the growths from cutting winds by placing a little peat or leaf-soil or Bracken around them, when the plants will stand many degrees of cold without the least injury.—W. A. COOK, *Leonardslee*.

The Grading and Packing of Fruit.—This subject, referred to on page 586, issue November 23, by Mr. A. H. Pearson, with an editorial footnote, is a very important one. For ten years I marketed fruit, from Grapes to Strawberries, and during that time only lost 6s. owing to faulty packing out of many hundreds of pounds' worth of produce. Through grading and packing mainly in boxes with tissue paper, cotton-wool and dried beaten moss raked up in the fields, we secured the highest prices. Moss, where filling-up material is necessary, well beaten and prepared, does not taint fruits, and this I proved by packing annually about four thousand Peaches and Nectarines in it. In addition to grading carefully, we advised the salesman the night previous to the despatch of the goods what to expect, and as he could rely upon the quality, the produce was often sold the next morning before it arrived at its destination, and higher prices were secured. With regard to Pear Marie Louise flowering too easily on warm walls as to be generally destroyed by spring frosts, mine were given just sufficient light protection to prevent such loss, and, having trees in other positions, the supply of these fruits was prolonged a little. I quite agree with Mr. Pearson that Victoria Plum does best grown in the open, and have not found examples more satisfactory than those grown as bushes.—B.

Rock Gardens in the Making.—Mr. E. H. Jenkins, the writer of the article on the above subject, page 590, strikes the true note in all he says about the natural grouping of the rock necessary in the making of a good rock garden. I am glad that he gives unstinted praise to a certain rock garden at the last International Show. This, to my mind, stood out *facile princeps* above all the rest, its effectiveness resulting from its simplicity and from its truth to Nature in her happiest and most reposeful mood. Mr. Jenkins says truly that "far too many artificial rock gardens err on the side of pretentiousness." Many builders of rock gardens seem too desirous of showing off their rocks rather than the exquisite inlaid jewellery of an alpine slope. They err in piling up their blocks of sandstone or limestone as though they were the "tumbled fragments of an infant world," and I find it is no easy matter to persuade people to have their fine rocks deeply embedded, or, indeed, bedded at all, in the loamy banks prepared for them. It is quite a mistake, however, to have the rocks too prominent. One of the best examples to follow is some natural outcrop of rock, not too clearly defined nor too regular, as in the level rocky terraces in the cañons of the Colorado, but where former lateral and vertical pressure has altered the stratification, and where the tops of the rocks have been discovered by the processes of denudation, and where weathering has played its part in the ages. This is well exemplified by Mr. Jenkins when he writes about the "teachings of our own hillsides," and I am looking forward with great interest to more articles of his on "Rock Gardens in the Making."—G. H. ADDY, *Ightham, Kent*.

Fragrance in Chrysanthemums.—In a "Note of the Week" (October 26), on the single Chrysanthemum Eric Harvey I was particularly impressed by your words "It is very fragrant." Now, was not your comment somewhat remarkable? I suggest it was for the following reason. Looking up four well-known garden books—one of them being on Chrysanthemums only by an expert—also various notes and articles by writers in papers on this flower, I find no reference whatever to any indication of fragrance. Why is this? Perhaps some authority on this favourite will offer a few remarks. Fragrance is such a recommendatory virtue for a plant to possess that surely there can be nothing but added interest and extended admiration in store for the Chrysanthemum should it be found to be the owner of such sweet wealth. A short time ago I had some sprays of a pink Pompon given me, and it was the decided sweet smell of these which made me take note of your remark; the variety was given as Hannah Stacey. Since then I have had some pieces of a single pink, with a slight inclination to streaks of white on some of the petals, also given me, and this was still more perfumed. Its name I do not know. Is the fragrance only to be found in certain singles and Pompons? Come forward ye 'Mum authorities and explain. The usual eulogies of this flower are: Last long when cut; useful for decoration; lovely and numerous colours, &c. Can the books and catalogues of the future hope to add the further commendation? Some are fragrant.—C. TURNER. [The flowers of the variety Eric Harvey emitted a delightful fragrance that reminded us of honeycomb. Unfortunately, this is not found in many other varieties, but we should be glad to hear of others that are fragrant.—Ed.]

How to Exterminate Moles.—In a recent issue of THE GARDEN a correspondent was advised that nothing could be done to destroy moles under trees, and was advised trapping as a remedy; but to catch a mole in loose soil with the ordinary iron trap is, to any but an expert, a most difficult feat, and few seem to know the habits of the creature well enough to select the right part of the run in which to place the trap. It is not generally known that moles are easily caught in pitfalls placed in the main runs. Deep, narrow biscuit tins or earthenware jars, such as are commonly used in gardens to trap mice, may be used. The receptacle used must be sunk till the top is exactly on a level with the bottom of the run, which must be carefully smoothed off and end abruptly at the edge of the jar or tin, and be covered with a slate or tile to exclude all light. But by far the easiest way of destroying moles and all other underground vermin is by injecting bisulphide of carbon in their runs and burrows. Open the run near where the moles are working or where they have their nests and pour in an ounce of the bisulphide, and at once cover tightly with a flat stone or tile to prevent the fumes from escaping. Leave it thus for a couple of minutes, then remove the covering and apply a lighted match to the hole and explode the vapour, when any vermin within reach of the fumes will be instantly killed. The liquid should not come into actual contact with the roots of any plants or trees, but the vapour will do them no harm. It must be remembered that bisulphide of carbon is both poisonous and very highly inflammable. It must on no account be brought near fire, and the person using it should not be smoking at the time. It is, however, a most useful substance, and by its aid the garden can be kept free of many underground pests.—H. C. WOOD, *The Gardens, New Place, Lingfield, Surrey*.

A Hybrid Chestnut.—At this season many intending planters are, naturally, on the look-out for rare and little-known subjects for the garden and pleasure grounds. *Æsculus plantiërensis* is a distinct and pleasing hybrid Horse Chestnut raised in the nursery of Messrs. Simon Louis Frères at Plantières-lès-Metz. It came from a seed of the common Horse Chestnut, which had been crossed, presumably, with *Æ. carnea* (rubicunda). In habit and growth the young trees are as free as the female parent. The flowers are delicate pink or pale rose in colour, the size of the terminal racemes being about the same as those of the common Horse Chestnut. An important point in favour of this tree for planting in public parks, open spaces and streets is that it does not produce fruits. Those in charge of the places named, where in the past the common Horse Chestnut has been freely planted, know only too well the trouble and often danger entailed in autumn by boys throwing sticks and stones up into the trees as long as there are fruits hanging.

Iris gracilipes.—One of the daintiest of all the lovely species of the Fleur-de-Lis which ever graced a garden is *Iris gracilipes*, a gem of the first water without cavil, and a rare beauty which should find its way into every rock garden or choice border where the very *élite* of plants are to be found. It comes from Northern Japan, and belongs to the Evansæ section, one which includes the lovely *I. tectorum* also, with *I. cristata*, *I. lacustris* and a few more. Words fail one in attempting to tell of it. It is less than a foot high with me, the leaves attaining about that length when fully developed and the stem being somewhat below that stature and carrying delightful little lilac flowers with a yellow crest down the falls. Such is a bald description of the main colouring, but it is insufficient to convey a full idea of the shading and marking of this delightful *I. gracilipes*. It flowers in summer with me, and is thriving in the rock garden on a flat spot in loam, sand and grit. It is a rhizomatous and not a bulbous *Iris*.—S. ARNOTT.

FORTHCOMING EVENTS.

December 2.—National Chrysanthemum Society's Floral Committee Meeting at Essex Hall, 3 p.m.

December 3.—Royal Horticultural Society's Meeting and Perpetual Flowering Carnation Society's Show (two days). Lecture on the first day by Mme. de Tzikos St. Leger on "The Vegetation of the Island of St. Leger in Lago Maggiore." Scottish Horticultural Association's Meeting.

December 5.—Linnean Society's Meeting.

December 7.—Société Française d'Horticulture de Londres Meeting.

December 9.—United Horticultural Benefit and Provident Society's Committee Meeting.

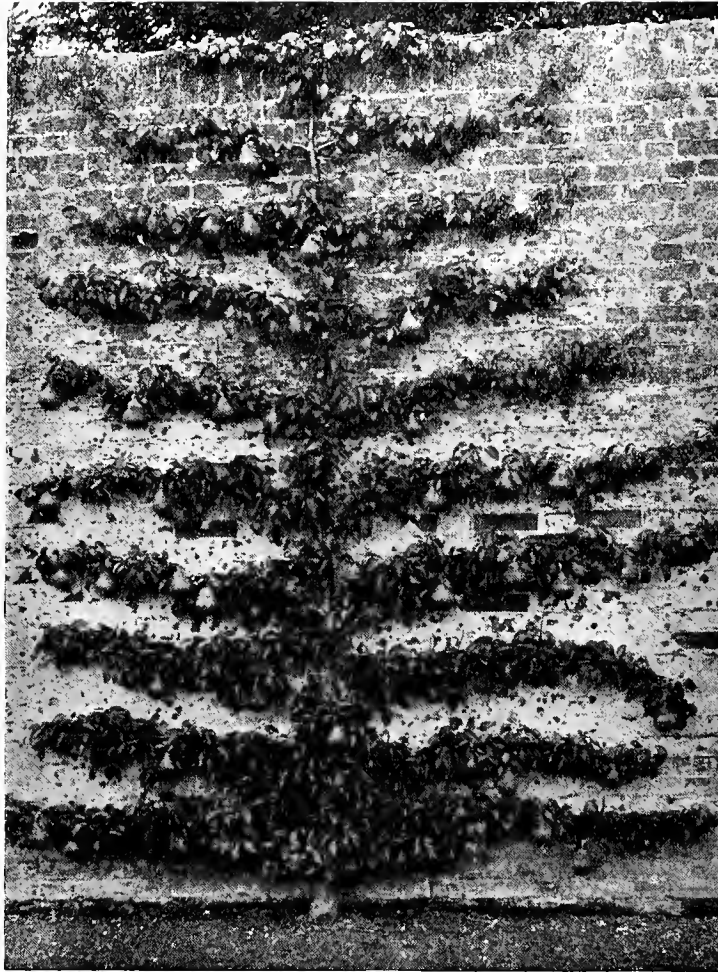
December 11.—North of England Horticultural Society's Meeting at Leeds.

GARDENS OF TO-DAY.

WESTWICK GARDENS, NORWICH.

THROUGHOUT the broad acres of Norfolk the craft of gardening occupies a prominent position in the eyes and minds of the public. The East Anglian Horticultural Club, with its head-quarters at the ancient city of Norwich, is one of, if not the strongest in the country, and among the most highly respected of its members is Mr. G. Davison, head-gardener at Westwick, the beautiful and old-world seat of Colonel Petre. The grounds at Westwick comprise

completely revolutionised the flower and given us varieties beyond the wildest dreams of imagination. It is now nineteen years since he first set himself the task of improving this flower, and by working on well-defined lines he has this year startled the whole world by giving us that beautiful variety *Star of the East*, which has already gained three first-class certificates, including one from the Royal Horticultural Society. Five years ago Mr. Davison secured the first seedling of this magnificent flower, and now he has about one thousand seven hundred plants, one of the accompanying illustrations showing a border in the kitchen garden filled with it. We hope next spring to publish a coloured plate of this *Montbretia*, which has flowers of rich orange red colour and from 4 inches to 4½ inches in diameter. When Mr. Davison first started working among the *Montbretias*, he had the variety *crocosmæflora*, and a variety named and raised in France, *Golden Sheaf*. These he crossed, and since that time all the beautiful varieties he has given us have been secured by intercrossing his own seedlings. Among these earlier varieties are *George Davison*, *Ernest Davison*, *King Edmund*, *Hereward*, *Westwick*, *Norwic* and *Prometheus*. All these secured awards of merit from the Royal Horticultural Society, and, in addition, *Prometheus*, sent out six years ago, and of which a coloured plate was published with our issue dated January 19, 1907, was awarded first-class certificates at the following shows: Shrewsbury, York, Edinburgh, Amsterdam and Paris. Now it is eclipsed by *Star of the East*. Mr. Davison's method of growing *Montbretias* is as follows: Plant in March in good, sandy loam that contains a fair quantity of leaf-soil, select a rather cool position, and give the plants plenty of moisture. Lift in autumn and store in a cold frame with their tops shortened to about six inches, just keeping severe frost away. Take the lights off on fine days.



A WELL-TRAINED TREE OF PEAR DOYENNE DU COMICE AT WESTWICK GARDENS.

about two thousand acres, the greater part of which is devoted to woodland and a large portion to a fruit farm, all of which come under the supervision of Mr. Davison. In the woods is one of the most beautiful pieces of ornamental water that we have seen outside the borders of Scotland, its banks being planted with Scotch and Cluster Pines that impart a sense of grandeur to the whole. But it is of the gardens that we would specially write.

The Montbretias.—When, in the future, some scribe essays to write the history of these beautiful hardy flowers of late summer and autumn, it will be necessary for him to devote several chapters to Mr. Davison's work, for he has

The Flame Flower.—This beautiful plant, *Tropæolum speciosum*, the despair of so many gardeners, is grown remarkably well at Westwick. Mr. Davison gives it a north or north-west position against a wall some twenty feet high, draping old fish-netting for it to climb over. In his opinion it needs a very cool root-run, with plenty of humus and sand in the soil. Every other year in February he lifts the roots, digs out the old soil to a depth of 18 inches, fills in with good soil, and replants the roots about four inches deep. These plants grow about twelve feet high the first year, and the next season reach the top of the 20-foot wall and flower profusely. By treating a portion in this way each year, growths of one and two years are always available.

Gentiana acaulis Eighty Years Old.—A particularly interesting feature at Westwick is two oblong beds of this charming alpine, which have

been in existence at least eighty years and possibly well over a century, and which have never been disturbed. The plants are remarkably healthy, and at the time of our visit in mid-September had a few of their rich blue flowers standing well up above the carpet of green foliage. Mr. Davison's family have been gardeners at Westwick for about a century, his father, grandfather and great-grandfather occupying that position before him, and it is through this long family association with the gardens that the age of the Gentsians is known.

The Herbaceous Border.—This is one of the features of Westwick, and one that owes its inception to Mr. Davison. During the whole of spring, summer and autumn it is exceptionally beautiful, and, in common with everything else that he sets his hand to, the flowers are all particularly well grown. Those who visited the horticultural section of the Royal Agricultural Society's show at Norwich last year will no doubt remember the magnificent exhibit of hardy flowers staged by him there. The accompanying plan of this well-designed border will, we hope, prove useful to others at this season of planting.

The Pergola.—Running from the mansion to the kitchen garden is a beautifully-designed pergola about one hundred yards long, thirteen feet wide, twelve feet high. This was erected by Mr. Davison about seventeen years ago, the pillars being bold Larch trunks. These have just had to be replaced, and he has now selected Chestnut, which, he thinks, will be more durable. The wrought-iron gate, which admits the visitor from the pergola to the kitchen garden, is one of the finest examples we have ever seen, and is of local workmanship, being made at Norwich.

Daffodils and Habranthus.—To show the activity of this excellent gardener, we must just mention that the hybridisation of Daffodils has received his attention for some years past, and several high-priced varieties that have been placed on the market during recent years by the leading firms have been raised by him. Habranthus pratensis, too, he grows in abundance, planting the bulbs outside much in the same way as he does his choice Daffodils. We should say that Mr. Davison has the largest stock in the world of this beautiful and rather rare bulbous plant.

Pears.—All hardy fruit is particularly well done at Westwick, but of Pears Mr. Davison makes a



MR. G. DAVISON, THE RAISER OF THE NEW MONTBRETIA PROMETHEUS AND STAR OF THE EAST.

speciality. Go where you will, you find Pears growing to perfection, the walls being covered with beautifully-trained trees. At the British Fruit Show held by the Royal Horticultural Society in London, Pears grown at Westwick have won many prizes, beating those grown in the more favoured county of Kent; and for the benefit of any who may be sceptical on the point

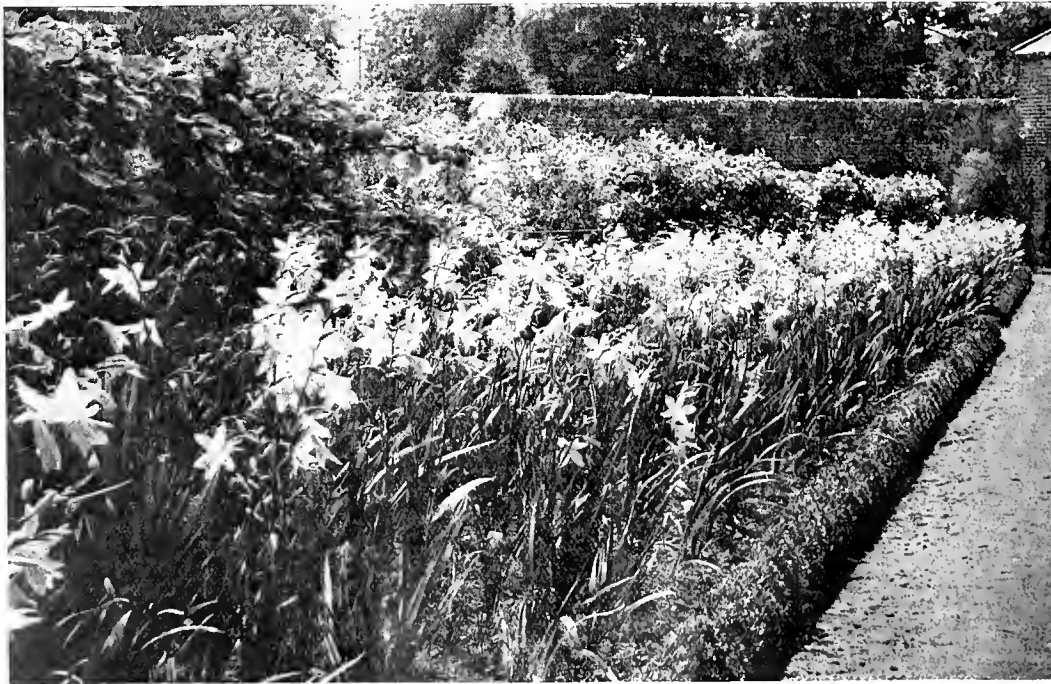
we may mention that Mr. Davison has not a single tree growing under glass. Doyenné du Comice is his favourite variety, and it is interesting to note that in the spring, when the flowers are open, artificial pollination, with the aid of a rabbit's tail fastened to a long stick, is resorted to. The whole of the trees are beautifully trained and well cared for, the accompanying illustration of a specimen of Doyenné du Comice giving some idea of the method adopted.

A New Black Currant.—With the idea of securing a new late-ripening Black Currant with a tough skin, so that it will travel well, Mr. Davison has commenced crossing existing varieties, and already he has some eight thousand seedlings well on the way. That he will be as successful as he has been in other directions we have little doubt.

STERILISING SOIL FOR EELWORM.

A CORRESPONDENT asks for directions as to sterilising earth for the destruction of stem eelworm. It is difficult to answer such an indefinite question, for everything depends upon the quantity of earth to be dealt with and where it is. Partial sterilisation of the soil is an efficient means of dealing with several pests that live in the soil, eelworms in particular, and it has the further curious effect of first delaying growth for a very short time, then hastening it, so that plants put into such soil quickly overtake those put into similar but untreated soil. The cause of this appears to be as follows: Most of the bacteria are killed, but not all. The minute animals that prey upon the bacteria are also killed, as well as eel-

worms and so on. The bacteria that remain are able to grow at a rate far exceeding that of those in soil where their animal enemies abound, and in growing they produce from the decaying matter which forms their food a correspondingly greater amount of ammonia. Plants, therefore, in this partially sterilised soil have greater stores of ammonia at their disposal than those in untreated soil and are consequently able to grow more rapidly. Other advantages are the prevention



A BORDER OF THE NEW MONTBRETIA STAR OF THE EAST IN THE GARDENS AT WESTWICK, NORWICH.

of the growth of moss on seed-pans and the destruction of weed seeds.

By far the most efficient method of effecting partial sterilisation is by heat. Other methods not so efficient, but able to be applied under certain circumstances, are flooding, drying out and the use of chemicals.

Heating by Steam.—The most effective way of heating is by the application of steam. Dry heat apparently occasionally causes undesirable changes, which check growth to a very great extent; but probably this is most marked when a high temperature is reached. As a rule, if a soil mass can be heated to 180° Fabr., that is sufficient to ensure most of the benefits of partial sterilisation. It is obvious that heat such as is required cannot be applied on a large scale outdoors, but on a small

but this should not be done to such an extent that the soil becomes charred. Several methods besides the use of the kitchen oven are in vogue. Heating the soil on a shovel over a fire, thrusting red-hot iron plates or even hot bricks into the soil heap, may be practised.

Treatment by Chemicals.—Carbolic acid, formalin, naphthalene, carbon bisulphide and so on are used at times; but their use is not unattended by danger to the crops to follow, and is not always satisfactory. The only method which at present seems to offer some degree of success outside is the use of powdered quicklime, dug in while still in a thoroughly caustic state. Potash salts also apparently have a slightly sterilising effect, especially kainit. No doubt in time some substance injurious to animals, such as the eelworms

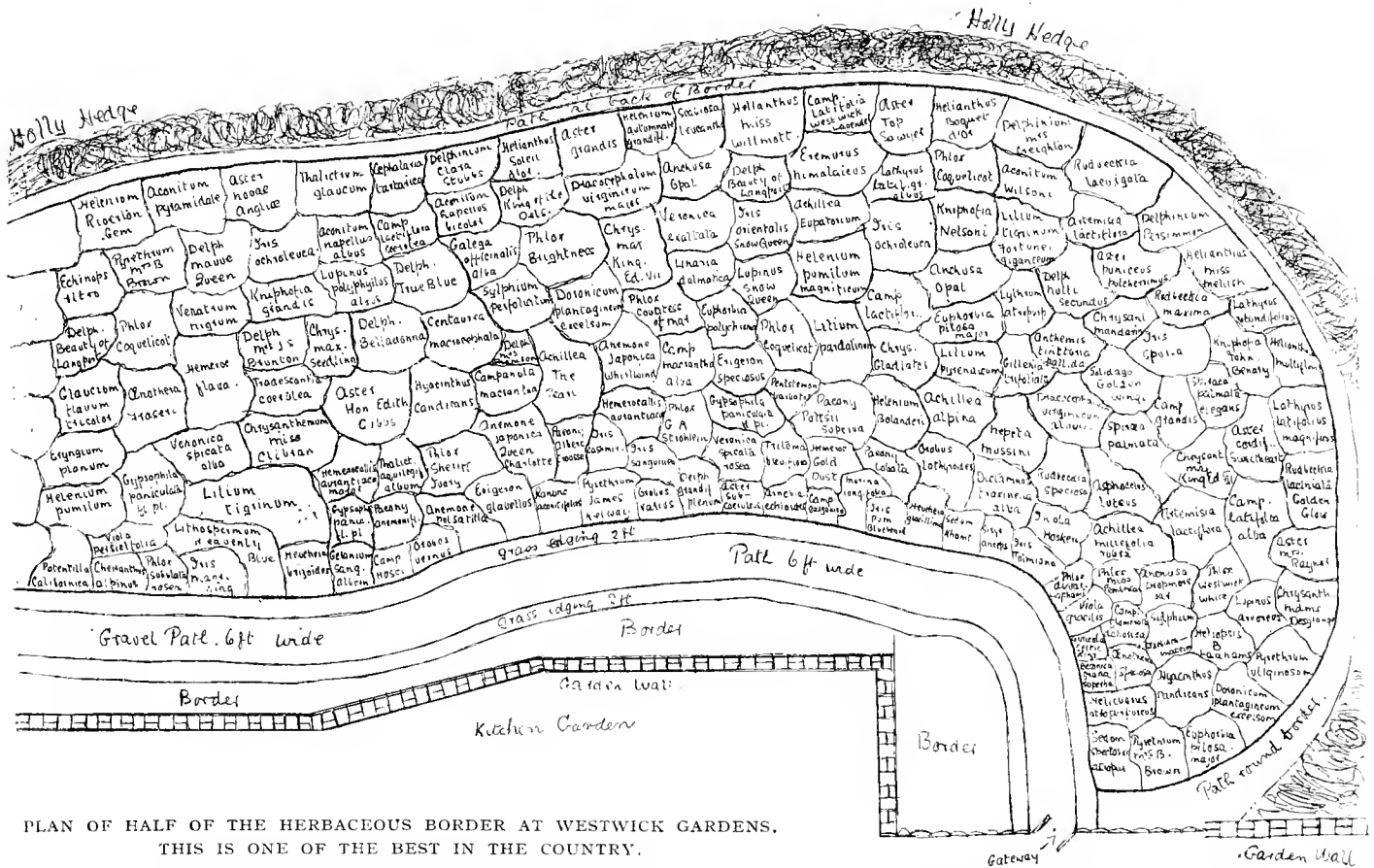
THE ROSE GARDEN.

NOTES ON NEWER ROSES. HYBRID TEAS FOR EXHIBITION.

(Continued from page 589.)

Mrs. George Sawyer (Lowe and Sawyer, 1911).—As seen exhibited by Messrs. Mount and others, this Rose promises well from the exhibition standpoint; but I have not grown it myself, although I hope to do so next year. It is a nice pointed flower, with petals of good substance, and its growth, I am told, is excellent. Another flesh-coloured flower, but with rather more contrast than most Roses of this colour have got.

Mrs. J. H. Welch (S. McGredy and Son, 1911).—This Rose obtained the gold medal of the National



PLAN OF HALF OF THE HERBACEOUS BORDER AT WESTWICK GARDENS. THIS IS ONE OF THE BEST IN THE COUNTRY.

scale it may be easily managed. Taking steam first, we may have a box or tank made with pipes perforated at intervals running along the bottom, and after putting the soil to be treated into it and covering over with a canvas cloth, we may drive steam from a boiler through it. If this method be adopted (as is done in several commercial growers' places now), pressure of 60lb. to 80lb. to the square inch is required. A modification of this method is in use in greenhouses, where a movable frame of perforated pipes is laid so as to cover half a bed, and soil from the other half is thrown over it and covered with canvas. The steam is then driven through and the temperature raised to the required degree. The frame can then be moved on, and so the whole house may be treated a piece at a time.

Baking the Soil.—Where steam-heat cannot be obtained, baking the soil may be resorted to;

and minute creatures which prey on bacteria, will be found sufficiently cheap to act as a soil steriliser, and with it will begin a new era for those whose business it is to gather the riches of the soil.

SCIENTIST.

BUDDLEIA OFFICINALIS.

Those who are responsible for keeping a greenhouse or conservatory furnished during the winter and spring months will find a batch of this Chinese Buddleia of great service, for it has a prolonged flowering period. It can be grown as a small bush in a 5-inch or 6-inch pot, and such a plant may be expected to bear up to a dozen inflorescences. The lilac-coloured flowers are borne in dense, terminal panicles from early December until February, and during the greater part of the time the plants are in first-rate condition. The lance-shaped leaves are greyish in colour.

W.

Rose Society at the same time and place as Edward Mawley, and perhaps has been somewhat overlooked in consequence. Of the two it has been far more reliable with me. It is an enormous flower—I think probably the largest Rose we have; but, at the same time, it has very few petals. I know of no Rose more deceptive in appearance in this respect, but it retains its shape in a marvellous fashion for several days, and then falls wide open into a flower as large as a small cheese plate. It is a Rose that I can strongly recommend, notwithstanding these characteristics. Its growth is vigorous; it produces its flowers freely and continuously (they must be disbudded), and they are held erect. At its best it is a most brilliant colour, very distinct, which one can only describe as a rose pink, but at times extraordinarily rich and brilliant, and quite unlike any other pink that I can call to mind. It has a slight perfume.

Mrs. Maynard Sinton (S. McGredy and Son, 1910).—Another Portadown Rose of merit. Its colour is pale flesh, almost white; flowers of large size, apt to come perhaps too big for elegance, with a very delicious perfume. Those grumblers who are always saying that Roses are losing their fragrance are not up to date, as many of the new Roses are the most fragrant that we have, and this is an excellent example. It is not a vigorous Rose, but a very healthy, robust grower, with good, sturdy shoots well able to support the large flowers that are produced at the end of each shoot. Very nearly mildew-proof. It was awarded the gold medal at Salisbury Show in 1909.

Mrs. Muir Mackean (S. McGredy and Son, 1912).—This Rose has been one of the successes of the year in my garden, and I can very strongly recommend it to exhibitors and, in fact, all Rose-lovers. Its flowers always come good and are most freely produced. At the time of writing (the second week in November) my plants are covered with buds. Its habit of growth is all that is desirable, and not too vigorous, as most of the red Hybrid Teas are apt to be. It is a self-coloured flower of deep carmine-crimson of quite perfect shape. When I have added that it is fragrant and practically mildew-proof, it will be seen that there is very little fault to be found with this latest production from these raisers. It can be best described as a darker and improved Mrs. A. E. Coxhead. It is distinctly a reliable Rose, in the sense that its flowers are always of good shape and up to exhibition standard. Its colour stands well in any weather, and in my opinion it is one of the best Roses of the year. It received a silver-gilt medal at Ulverston and a card of commendation at the autumn show in 1910; but many a Rose not half as good as this one has had the gold medal.

Mrs. Sam Ross (Hugh Dickson, 1912).—Another Belmont variety that I am inclined to think is the best Rose of a very strong set of four that this firm are sending out this year. There is a refinement about this Rose that must appeal to everyone. I fell in love with it at first sight at the Royal Botanic Show in 1911, and my first impressions were confirmed at Belmont, where some glorious rows of it were in full flower. The Roses had had two or three days' rest, so good flowers were numerous. It is a pale yellow, the colour shading from straw colour to almost a chamois tint; but this is a very inadequate description. The flowers are of large size, with plenty of good-shaped petals that in the open flower are reflexed at the edges. The growth is upright, and the flowers are held erect and sweetly perfumed. A Rose that will be a great favourite with the ladies. A gold medal Rose that the raisers think very highly of, and rightly so, too.

Southampton HERBERT E. MOLYNEUX.

(To be continued.)

TREES AND SHRUBS.

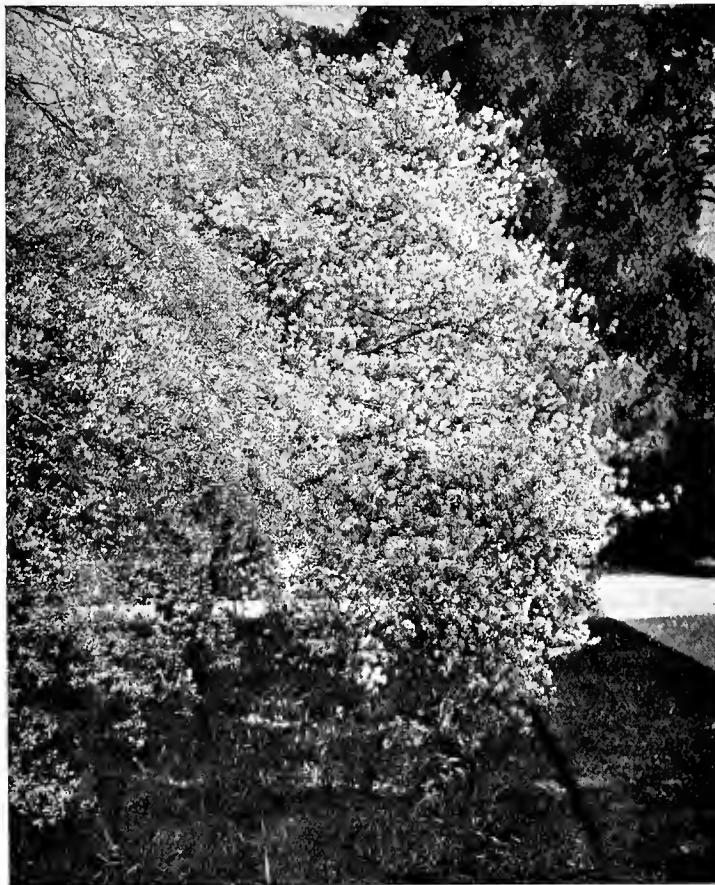
THE BEST TREES AND SHRUBS FOR SMOKY TOWNS.

THOSE who are expected to keep gardens gay in smoky towns are severely handicapped, for they are prevented from planting many of our most ornamental plants, and even those subjects which give the most satisfactory results rarely attain the degree of excellence which we are apt to associate with them when growing under other and better conditions. Smoke is not always the worst enemy either, for in addition to smoke there are fumes from chemical and other works which render most phases of gardening impossible,

sparingly, for they have less chance of success than deciduous shrubs; the latter shed a considerable amount of dirt with their leaves in autumn. The leaves of evergreens, on the other hand, get dirtier as the winter progresses, and the pores become so choked with dirt that they cannot fulfil their proper functions. Those evergreens which are selected should be kinds with glossy rather than dull leaves, as dirt is more easily removed by rain from the former than from the latter. Evergreen conifers ought not to be planted in or near a smoky town, for they never thrive in an impure atmosphere.

The common Holly (*Ilex Aquifolium*), together with its glossy-leaved forms, is one of the best evergreens for smoky towns, and fairly good examples may be noted about the metropolis. For instance, a number of good bushes are to be seen in Camberwell Park, which is in a very thickly-populated neighbourhood, and the atmosphere is heavily charged with smoke. Then the Aucuba gives good results in many places. The common Ivy thrives under the most unsatisfactory conditions, while its numerous tree forms also give satisfaction. *Berberis stenophylla* thrives fairly well, but, with many other shrubs, it ought not to be allowed to stand too long, and as soon as signs of deterioration are noticed it should be replaced by a healthy young plant. *B. Aquifolium* and the common Box are other evergreen shrubs which may be planted.

Among deciduous trees and shrubs, several instances of different kinds flourishing under unsatisfactory conditions may be noted in the City of London. Almost within a stone's throw of the Bank one or two well-developed Mulberry trees are to be found. A specially fine one is to be seen in a small garden attached to the offices and rooms of the Honourable Company of Girdlers in Basinghall Street. This must be at least 30 feet or 35 feet high, with a considerable spread, and a good crop of fruit is ripened each year. *Catalpa bignonioides* is another tree which gives good results in the heart of London, while the Plane has become famous the world over by reason of its happy knack of resisting the enervating effects of the London atmosphere. The Horse Chestnut



THE SNOWY MESPILUS (*AMELANCHIER CANADENSIS*), EFFECTIVELY PLANTED WITH A BACKGROUND OF DARK EVERGREEN TREES.

(See page 603.)

and sorely try the skill and patience of the cultivator. As evidences of the worst conditions, reference may be made to such towns as Runcorn and Widnes, on opposite banks of the river Mersey, and to Sheffield and Rotherham. The latter town has been very hardly hit during the last ten years, for the opening of numerous large coke ovens, with their attendant fumes, has made tree-life almost impossible. Still, by perseverance some things can be found which will thrive, or at any rate live, under even these conditions; while when smoke only is the drawback, a considerable number give moderately good results.

When selecting trees and shrubs for smoky towns, those with evergreen leaves should be chosen

is not a good tree for resisting smoke, and in the smokiest parts of Glasgow it is seen as a miserable example with poorly-developed leaves. The same remarks apply to the tree in Rotherham; but, curiously, the red-flowered Horse Chestnut grows as well as any tree can be expected to under such unsatisfactory atmospheric conditions. This is apparently a case of a hybrid tree being more vigorous and having a better constitution than its parents.

The Ash resists smoke fairly well, but the Beech does not. *Robinia Pseudacacia* is another tree to plant in smoky towns, while *Ulmus glabra* does moderately well. *Pyrus pinnatifida*, *P. rotundifolia* and others of the *Aria* group are good trees

for smoky towns, as may be seen in the smokiest parts of Glasgow. Mr. Whitton, the very able Parks Superintendent of that city, appears to have been one of the first to discover the smoke-resisting capabilities of *P. pinnatifida*, and he uses it largely.

The various kinds of ornamental Crabs may all be used, *Pyrus floribunda*, *P. spectabilis* and *P. Ringo* being a good trio. Flowering Thorns also do fairly well. The common Lime is never very satisfactory in a smoke-laden atmosphere. At the best of times its leaves begin to fall early, and when the atmosphere is bad, many leaves fall during the first half of August. As a rule, trees which start into growth late have a greater chance of success than those which commence growth earlier in the year, while both trees and shrubs with glabrous or almost glabrous leaves usually thrive more satisfactorily than those whose leaves and branches are hairy.

Of deciduous shrubs, the Flowering Currants, Philadelphuses, Lilacs, *Viburnum Opulus* and its sterile variety, species of *Cytisus* and *Genista*, *Forsythias*, *Diervillas*, *Prunuses*, *Cotoneaster frigida*, *Deutzia crenata*, *Rhus typhina*, *Cornus alba Spæthii* and *variegata*, and *Lonicera tatarica* may be planted; but provision must be made for replanting occasionally, for, once they begin to show signs of weakening health, there is little chance of their recovery, no matter what method of culture is tried; therefore it is better to start again with vigorous young stock. All that can be done by working the ground thoroughly and providing good soil to help to establish the plants should be carried out, for a good start is more than half the battle. It is also a good plan to hose the shrubs and small trees overhead occasionally, in order to remove as much dirt as possible before it can become firmly fixed on the leaves and branches. W. D.

THE SNOWY MESPILUS.

(AMELANCHIER CANADENSIS.)

Few hardy shrubs are so well named as the Snowy Mespilus, which in late March or in the early days of April is so smothered with the profusion of its pure white flowers as to resemble a huge snowdrift in the distant effect. Flowering as it does so early in the year, it is advisable when planting to choose a position where its flowers will show to the best advantage, such as a background of the Evergreen Oak or Holly would provide. When planted in association with early-flowering shrubs, such as Almonds and double Cherries, the bright effects so produced are pleasing in the extreme.

The Snowy Mespilus belongs to the large Natural Order Rosaceæ, and has for its near relative the common Medlar (*Mespilus germanica*), but the flowers of *Amelanchier* are much smaller; indeed, it may be regarded as one of the daintiest and most profusely-flowered trees in cultivation. It is not in the least particular in regard to soil, and, in common with the Bird Cherry and Thorns, it revels in sandy woods. There can be no doubt at its hardiness, as it succeeds in all parts of the British Isles.

ROCK AND WATER GARDEN.

ROCK GARDENS IN THE MAKING.

(Continued from page 590.)

Overhanging Rocks.—In rock garden building there is perhaps no greater error than that of the overhanging rock, and the more so when arranged according to the mason's plan as opposed to that of the intelligent gardener. In the case of the first named, the rocks are usually cemented together in more or less stereotyped fashion, and at such times the error resolves itself into a source of danger, and for the following reasons: Cemented joints, according to the mason, ensure stability. I agree. They also ensure that the crevices between the rocks contain no soil; hence the impossibility of garnishing them with plant-life. I repeat again, and the fact should be kept well in mind, that every rock garden should be a home—a happy one, too—for alpine plants, and not what it might prove to be—the most fiendish of cemeteries

garden is the variety of aspects that a thoughtful arrangement of the rocks affords. For example, a miniature ravine in a cool and sheltered or, preferably, moist place would be ideal for colonising *Haberlea* or *Ramondia*, while these same plants would be perfectly happy in nearly vertical crevices where an amply-supplied larder was within their reach, and where in dry weather a perforated pipe at will emitted its refreshing draught. For such things north or north-western aspects are excellent, while for similar positions on the exposed sun-kissed sides there are hundreds of available plants. To the rock-builder the crevice or fissure in the rock should be regarded as among

The Greatest Assets, those purposely indulged-in phases that lend themselves so admirably to the planter, and which in due course should glitter with the choicest of gems. A most elementary study of the root systems of a few alpinists will reveal how much the crevice or fissure is to the plant, or, to put it more accurately, how the plant through centuries has adapted itself to



SAXIFRAGA OPPOSITIFOLIA IN ITS NATIVE HAUNTS.

where it is the practice to buy the victims alive. I am strong upon the point—though I hope not too strong—because of its danger and because of the reckless way the thing is both recommended and done. Even as I write a book is open before me showing in detail the construction of this plant-starving arrangement, where every rock is a capstone to the one below it, a roof, a tile, shooting away the moisture and ensuring that powdery, inert dryness which renders plant-life an impossible thing. One is pleased, too, to note that in the main such useless projections find no place in the newly-executed rock garden at Wisley.

Large Rocks and Crevices.—In our dealings with the larger rock masses two items of the highest importance should be kept in view, viz., ensuring a great variety of aspects and the charging with soil and rocky *débris* each and every crevice as it is formed. One of the greatest charms of a rock

such environment. To a few plants—the woolly and tufted *Androsaces* and the most diminutive of the *Dianthi* and *Saxifrages*—such things border on the essential, chiefly because of their impatience of soil, soil dampness and richness, and which is increased because of the fog and humidity prevalent for weeks, it may be, in lowland gardens. Hence such positions constitute both a safe and a right place, while the root-fibres far away in the cool recesses of the rock know nothing of the vicissitudes prevailing without. In every thoughtfully-arranged rock garden there should exist a

Damp or Wet Corner or Bay, since all alpinists are not of the crevice tribe. Not a few, indeed, of the plants from the high altitudes of the Himalaya are virtually bog plants, lovers of moist and rich soils, and while exquisite in their beauty and among the more easy to cultivate, our rock garden should contain a place for them. One has but to

recall many Primulas, Meconopsis, Dentarias, Trilliums and Cypripediums to get an idea of their wealth and variety, while even such as *Anemone nemorosa robinsoniana* and *A. n. Allenii* simply glory in such places. The only way to secure the damp and shade in which such things delight is to form a bay with rocks around and, by arranging for a depression in the soil—anything a few inches below the ordinary level—ensure a more uniform degree of moisture and coolness for the roots than would be otherwise possible. The high rocks around would at once afford shelter and shade, and may be utilised for *Ranondias* and not a few of the alpine Primulas of the *viscosa* and allied sections. To ensure the continued moisture of the colony, water should be laid on by the aid of obscured perforated pipes capable of being utilised at will. There should be an efficient drainage of potsherds, stones or brickbats, and these covered with turves set grass side downwards; then a bed of loam, leaf-mould and sand in nearly equal parts and 1 foot in thickness, or, if needs be, a small colony wholly of peat and leaf-mould. Another little bit might be of sphagnum moss and spongy peat for Sundews and *Sarracenias*, while the dampest of sandstone blocks could be studded with *Pinguiculas*, which ever claim attention. In this way the damp corner can easily be made one of the most interesting and enjoyable places the rock garden contains. E. H. JENKINS.

(To be continued.)

SAXIFRAGA OPPOSITIFOLIA IN ITS NATIVE HAUNTS.

THE characteristic feature of the highest rock-falls or stone slopes in both the Bernese Oberland and the Valais is the purple Saxifrage. When all but the dwarfiest natives of the Higher Alps, such as *Androsace glacialis* and *Ranunculus glacialis*, have been left behind, and we come upon rugged desolations of weathered rocks—strewn over the mountain-side in the utmost confusion—then there greet us vast masses of the dark green foliage surmounted by the purplish crimson flowers of *Saxifraga oppositifolia*. Here in its native habitat it grows among the decomposing stone in great undulating cascades, mantling the boulders with its minute leaves in such immense profusion as to entirely obliterate them in many places, despite the rough and tumbled character of the situation.

From the natural conditions which prevail in the mountains, we may, I think, draw the conclusion that it would thrive best in the garden if we provide it with deep, gritty rubble into which it may root, copiously supplied with fresh water during its growing season. The illustration on page 603 is from a photograph taken on the Augstbord Pass, a little over nine thousand feet high. REGINALD A. MALBY.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Chrysanthemum Mrs. W. T. Smith (Japanese).—A fine exhibition type of the purest white, with broad and crisp florets. To all-sufficient size is added a refined quality. From Mr. A. Smith, Roehampton.

Chrysanthemum Miss May Fox (Japanese).—Handsome flower-heads of large size and with long, drooping florets. The centre of the flower is greenish at first, but later becomes almost pure white. From Messrs. H. J. Jones, Limited, Lewisham, S.E.

symmetrically built, fragrant, and with long, self-supporting stems. The pot plants shown evidenced considerable freedom of growth. There was not a faulty calyx in the whole exhibit. From Mr. William Lawrenson, Yarm-on-Tees.

Carnation Mary Allwood.—Obviously a Britisher bred and born, and a flower of high excellence withal. The shapely-petalled flowers, their rounded outline, all evidence the home-raised article. The colour in this section is quite new. We call it rose salmon, as in this respect it is virtually a counterpart of the border variety *Queen Mary*. If a cropper—we have not yet seen the plant—there is a future in store for it.

Carnation Salmon Enchantress.—This is all that need be said of a sport having all the attributes of the most popular Perpetual-flowering Carnation ever raised. The name colour is good and descriptive, and—it is welcome. These were exhibited by Messrs. Allwood Brothers, Hayward's Heath.

Begonia Eclipse.—A semi-double variety of salmon rose colouring.

Begonia Scarlet Beauty.—An exceptionally vivid and striking bit of colour, quite new in the winter-flowering race.

Begonia Splendour.—Intense rich crimson, and, like the last, with moderately large flowers profusely borne. An acquisition by reason of its colour, which is most effective.

Begonia Lucy Clibran.—This is a larger-flowered variety, quite novel in colour, too, which is salmon, shading to buff or palest orange. Distinct and beautiful. The whole of these belong to the winter-flowering race, are most vigorous and free in habit, and profuse and abundant in their flowering. These were exhibited by Messrs. Clibran, Altrincham, Cheshire.

NEW ORCHIDS.

Cypripedium Elatior.—This is a most beautiful *Cypripedium*, derived from the intercrossing of *C. leeanum* and *C. Baron Schröder*. It is not large, but an improvement upon the latter parent in all its parts. The individual flower is almost round, the dorsal sepal being white and prettily marked with deep violet purple, while the pouch and petals are brownish with a few spots near the base. First-class certificate. Exhibited by F. Menteith Ogilvie, Esq. The plant carried four well-developed flowers (see illustration.)

A first-class certificate was also granted to the charming *Lalio-Cattleya Bella Orchid Dene Variety*, shown by Mr. E. H. Davidson, Twyford.

Awards of merit were made to *Lalio-Cattleya Scylla*, exhibited by F. Menteith Ogilvie, Esq., and to *Cypripedium Latonia*, from Lieutenant-Colonel Sir George Holford, K.C.V.O.

The foregoing awards were made on November 19 at the meeting of the Royal Horticultural Society.



CYPRIPEDIUM ELATIOR, A NEW AND BEAUTIFUL HYBRID.

Chrysanthemum Audrey (Single).—A very handsome yellow-flowered sort, the shade rich and telling. From the Manor House Nurseries, Cardiff.

Chrysanthemum Michael Harrison (Single).—A showy and attractive variety of crimson bronze and gold colouring. Under artificial light the effect would be brilliant in the extreme. From Mr. E. Harrison, East Grinstead, Sussex.

Carnation Snowstorm.—A pure white variety of great excellence florally, and with other good qualities also; indeed, we should not be far wrong in placing this near the topmost rung of Perfection's ladder. It is a fringed-petalled variety, highly and

GARDENING FOR BEGINNERS.

HOW TO PLANT FRUIT TREES.

THE cultivation of fruit trees has been practised for many generations, and no garden worthy of the name is considered complete without a few examples. The remarks made below about planting applies with equal force to all fruit trees, although for an amateur with a small garden there is no fruit so profitable and useful as the Apple; but if he should happen to have a wall, cordon Pears may be grown, or a fan-trained Plum while for a wall with a north aspect the Morello Cherry is unequalled. In the illustration is shown a pyramid Apple tree, the Keswick Codlin variety, which is about six years old, and full of spurs and fruit-buds. Such a specimen can be purchased from 7s. 6d. to 10s. 6d., and, of course, smaller examples can be secured more cheaply; but for a grower who requires quick returns, the type of tree depicted on this page is the best to purchase.

It will be noticed that it possesses a mass of fibrous roots, which are very essential to its future welfare, and the white band just above the roots should be on a level with the surface of the soil when planting is completed. This operation can be done from the end of October until April, but it is advisable to have it finished by the end of January when possible.

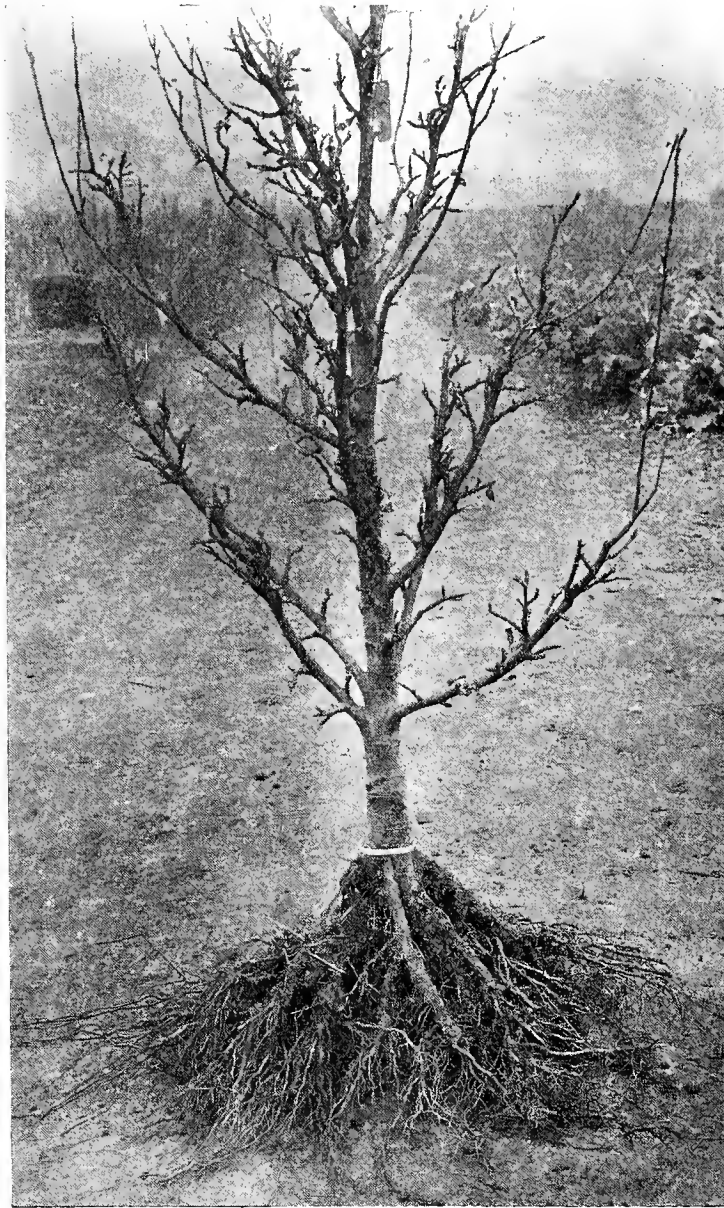
First of all, the position should be chosen, and where several trees are to be planted it is best to measure the length of the plot, so as to have them in a straight line and equal distances apart. Each station may be marked with a stick or pole. The usual space between pyramids is 3 feet or 9 feet from tree to tree and 12 feet between the rows; but if only a single row is wanted, as is often the case with an amateur, the distance between the trees may be less. It should be borne in mind, however, that no advantage is gained by very close planting, for light and air are two of the most important factors in fruit culture.

Trenching not Essential.—Some advocate an elaborate system of trenching the ground twelve months or so beforehand, but I say emphatically that this is not necessary, because the Apple and its near relatives will thrive and produce good crops in ordinary garden soil. Under such conditions short, hard wood is made and plenty of fruit-spurs; while what is known as root-pruning is seldom required. When the trees are carrying a

large quantity of fruit, it will be found expedient to thin slightly, and mulch the base of the tree with partly-rotted manure.

to sink a little as time goes on, and deep planting must be avoided. Having got the hole ready and the tree therein, begin to cover the roots with fine soil, and as the operation proceeds lift up the top fibrous roots and then add more soil; by this method they are brought near the surface. It will be necessary to lightly tread the soil around the tree to make it firm, while it may require a stake to hold it in position, especially in an exposed situation, till well established.

Regarding subsequent treatment, keep the ground frequently hoed and free from weeds, and should the summer prove exceptionally dry, a good watering occasionally will prove of considerable benefit. The subject of whether to prune or not to prune the first year is a controversial one, but, speaking from experience, I should certainly defer any pruning till the second season. S.



A PYRAMID APPLE TREE FURNISHED WITH FRUITING WOOD AND FIBROUS ROOTS. NOW IS THE TIME TO PLANT.

When planting, always make the hole large enough to spread out all the roots to their fullest extent, and before placing the tree in position break up the soil at the bottom of the hole with a fork, which will prevent the accumulation of water near the roots, particularly in low-lying districts. As a general rule it can be easily seen how deep the tree was planted in the nursery, and this fact can be safely taken as a guide when arranging trees in their new quarters, but this surface mark should be just above the soil, for the tree is sure

spring. Swanley White is an excellent double white variety.

Violets should be more largely grown in pots. A shelf in a cool greenhouse is an ideal place for the plants during winter. They present no cultural difficulties, and pots of Violet Marie Louise when full of flower are delightful. Failure may sometimes be traced to the use of a too heavy or rich soil. Ordinary good garden soil, with a little leaf-mould and soot added, forms an ideal rooting medium for Violets in pots. COLIN RUSE.

WINTER TREATMENT OF SWEET VIOLETS.

PLANTS growing in frames should be examined and all decaying leaves, old flowers and other extraneous matter removed. A little soot may be stirred into the surface of the beds. This will act as a slight stimulant, and also help to keep injurious insect pests at bay. In applying outside air to the plants, the weather conditions must be considered. On fine clear days advantage may be taken to remove the lights. Air and light are most essential in the healthy development of the plants. During showery weather the lights may be raised so as to admit air, providing the force from wind is not too strong to court disaster.

During spells of severe frost the sides of the frames should be banked up with long stable manure, and mats, Bracken, or straw placed over the lights.

For continuous winter flowering and general hardiness the variety Marie Louise is difficult to beat. Princess of Wales is a popular large-flowering single, producing abundance of flowers during

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Frames.—The cuttings of such plants as Calceolaria, Pentstemons and other summer-flowering plants that are none too hardy must be fully protected during spells of frosty weather. The frames should be uncovered whenever possible to admit light and a little air. During mild weather remove the lights entirely and stir the surface soil with a pointed stick, and any plants that show signs of getting leggy should have the points of the growths carefully removed. Violas ought not to be coddled, but need protection from heavy rains and snow. Should frost lift the cuttings out of the ground, these ought to be made firm again.

English and Spanish Irises.—If the planting of the bulbs has not already been done, the earlier these are placed in the ground the better. For cutting both sections are invaluable, and the cheap rate at which they may be obtained need not deter anyone from having them and planting freely, either in rows for cutting purposes or for the embellishment of the border. Nothing is gained by allowing the plants to remain on one site too long, and once in three years they will pay for lifting and replanting on a new site.

Lawns.—While the weather is open, any alterations necessary in the groundwork should be undertaken. It frequently happens that the edge near to a path or drive becomes patchy or worn. This may be removed and replaced with inner turf. New turf may then be used to fill the intervening space. Lawns that have become weak will be considerably benefited by having a good sprinkling of fine soil strewn over them, but defer sowing seed for another month or two. Avoid walking and other traffic over them in wet weather as much as possible, but frequent brushings and occasional rollings when not too wet will prove of immense benefit.

Plants Under Glass.

Perpetual-flowering Carnations.—There are several devices for staking that minimise the amount of time and labour taken up by the old method; but when the old-time system is followed with neat strands of twisted raffia, each growth should be separately secured; otherwise, when cutting the blooms, the growths dependent upon each other will need re-supporting. Carefully disbud the blooms as soon as the side flowers are large enough, and assist the plants with applications of soot-water and manures both in liquid and patent form. The time has arrived when a batch of cuttings may be inserted for next season's early flowering. Select vigorous young side growths about three inches or four inches long, pull them out cleanly and insert without any further making in sandy soil in a close pit, propagating-frame or a warm greenhouse where they may obtain plenty of light.

Poinsettias.—Late plants now developing their bracts and in comparatively small pots will greatly benefit by manual assistance. The flowers of these will last much longer in a cut state if the ends of the stalks are sealed by being held in a gas flame or otherwise burnt to stop them bleeding.

Azalea indica.—A few plants of the variety Deutsche Perle will be generally useful if brought along and forced into flower in a warmer house. The plants must not be allowed to become dry at the roots, and a little bottom-heat, plenty of light and a humid atmosphere, with occasional syringings with chilled water, will considerably hasten their development.

The Hardy Fruit Garden.

Fruits in Store.—These should be frequently examined and none but the soundest of the late-keeping varieties retained. Handle as carefully as possible, and take advantage during inclement weather to attend to this important work.

Pruning Orchard Trees.—The pruning of large trees in orchards is frequently neglected. The work of pruning need not be delayed any longer. By far the best means of accomplishing this work is by the aid of a pair of long pruners, except for large wood, which must, of course, be removed by the aid of a saw. Spur back all the growths on the branches, leaving about two-thirds of the leading growths if there is room for extension.

Where the boughs are too thick, remove the weakest entirely, and if very bad, rather than be too severe, extend the operation over another season. To obtain good quality fruit, overcrowding must be guarded against. Collect all the prunings and burn at once.

Fruits Under Glass.

Tomatoes.—The plants that are fruiting under glass must be very carefully watered at this season, as growth is comparatively slow. Just a little sprinkling of rich fine soil on the surface of the pots will be found to stimulate root-action. Keep the atmosphere fairly dry and buoyant by ventilating whenever possible, also a circulation of heat in the pipes.

Cucumbers.—See that the beds, especially near to the hot-water pipes, do not become too dry. Keep the foliage from becoming congested by timely thinning and regulating. The foliage should be syringed once or twice daily, as the weather permits, with water warmed to the temperature of the house. As soon as the fruits attain sufficient size, have them cut and the stalks immersed in a little water.

The Kitchen Garden.

Cauliflowers.—Take every opportunity of keeping the young plants pricked out in cold frames, well aired, as with the time of year approaching they may perforce be covered up for an indefinite period. Make a sowing in heat of a quick-maturing variety, and as soon as large enough prick out into shallow boxes.

Lettuces.—The same remarks apply to this crop growing in frames. Keep as healthy as possible by removing any yellowing leaves, and fill up any gaps with young plants. Lettuces may be sown and allowed to grow fairly thickly in boxes, cutting in the same way as Mustard and Cress, when these will be found most useful for salads.

The Shrubberies.

Ornamental Brambles.—There are a few species of Rubus with very ornamental stems, and where space permits, a bed of them at this season is very attractive. One of the best we have is Rubus giraldianus, of fairly recent introduction and one of the showiest. R. incisus and R. biflorus are two others with bright stems. The last year's growth may either be cut away now or, better, left till young growth commences from the base again in spring, as the farina is apt to become rubbed off if interfered with now.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

The Latest Flowers.—Cut any sprays of the latest Asters, such as Tradescanti, and Solidago Shortii still flowering. They will remain fit for vase furnishing if preserved in a cool place for a few weeks. Conclude the planting of any belated material at once, so that the borders need not be disturbed again till the turn of the year.

Snowdrops.—Under trees the tips of the growing points of Snowdrops are evident about this time, and it will improve the appearance of the masses, as well as be beneficial to the plants, to just cover the surfaces with some finely-sifted rich compost.

Narcissi.—If the ground is not in fit condition to stir with a hoe, it may be well scratched with a rake, which is of as much value culturally, the point being to aerate the soil and prevent the growth of low forms of vegetation on the surface, which takes place on certain soils at this time of year or when the atmosphere is more than usually damp. Beds of other bulbous plants should be treated in a similar manner.

Protecting.—This is as late as it is safe to leave applying protecting material to any plants which are not absolutely hardy. A simple and efficient protection is afforded by a layer, more or less thick, of flaky leaf-mould, or, where it can be had as a substitute, Cocoanut fibre refuse, both of which are clean and unobjectionable.

Roses.—These are afforded protection about this date. The material used is soil, about two spadefuls being heaped round the stem of each.

Manure of the kind usually employed causes here a soft growth in summer, and, apart from that, the beds, while it remains, are unsightly objects.

The Hardy Fruit Garden.

The Fruit-Store.—Up till now the fruit-room has been freely ventilated, so as to allow the odour from Apples to escape. Now that winter will soon set in, the windows are closed and means taken to keep out frost without having recourse to artificial heat to keep the temperature at as equal a point as possible. The less fruit is handled the better, but a sharp look-out must be kept for decayed fruits lest they contaminate others.

Pruning.—There is no special hurry to prune apart from its facilitating other work, and, once done, the ground about the trees can be cultivated. Usually trees are left too crowded, the shoots of the past season being cut back without considering that this method is sure to overcrowd the branches with useless spurs. It is imperative not only that these should be reduced to proper dimensions, each with a few buds only, but that they should be wide enough apart to allow of no overcrowding.

Canker.—Wherever this is seen it should be cut clean away into sound wood, and the parts removed and burned. Some varieties canker so badly in some soils that it is futile to give them room. Others on which canker fixes may be cured by spraying and by extra feeding on the surface. The stock of certain varieties seems to have a predisposition to canker.

The Vegetable Garden.

Ground-stirring.—Before winter sets in, the bare spaces between rows of Cabbages, Lettuces, Scotch Kale and Spinach may be surface-stirred with broad-pronged forks. This is particularly beneficial succeeding heavy rains, after the moisture has partially drained away.

Jerusalem Artichokes.—The crop is better lifted and the best of the tubers stored than left till spring. A new plantation of the medium-sized tubers may be made at once or delayed till spring. Deeply-worked, profusely-matured ground is essential, and the ground occupied by the current year's crop should be similarly treated before the succeeding crop is planted.

Mustard and Cress.—Where these are in request, small sowings should be made at intervals of every four or five days. The soil used should be rich, but need not be more than an inch deep, and saturated with water before sprinkling the seeds thickly over the surface. Cover with brown paper and put in a hot place, removing to a cool structure when the germination is complete. Use fresh soil for each crop, and cut the stems with a pair of scissors.

The Plant-Houses.

Bulbs.—Hyacinths and Tulips will force freely now if the precaution is taken to keep them always fairly moist in a temperature not exceeding 65°, and in the meantime in the dark in order to draw up the stems. The Tulips need not be uncovered till the flowers are well advanced, a few days' exposure bringing the colours all right. Narcissi must be brought on in a temperature 10° lower, but otherwise under similar treatment. It is essential for early forcing to grow only those varieties which experience shows are sure to succeed.

Zonal Pelargoniums.—Do not allow these to grow too much. It is a commendable practice to pinch the point of each shoot just beyond where new flower-stalks are springing, which keeps the plants dwarf and at the same time causes the flower-truss to expand to larger proportions than if the stopping were not done. A very little sulphate of ammonia dissolved in the water adds brilliance to the colour of the flowers. Plants full of bloom are valued for house decoration when massed, but they must be frequently changed, else the foliage yellows and the plants are spoiled for further use for the season.

Coverings.—During cold snaps coverings laid over the glass of pits are much to be preferred to extra firing for such things as Crotons, Dracenas and other tender plants, the foliage of which suffers in low temperatures. Coverings of every kind lose much of their value if used wet or damp, and means should be taken to dry them thoroughly every time after using. R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PLANTING MICHAELMAS DAISIES (Ilex).—Michaelmas Daisies may be planted at any time between November and the end of March. Take the clumps up and divide them into quite small portions, for better results are always obtained from small plants made up of a few branches rather than from large old plants with dense masses of stems.

SWEET PEAS (Surrey).—If the cow-manure is thoroughly rotted, it should be preferred to that from horses for your soil. Cultivate as deeply as you possibly can and work the natural manure into the second spit. Into the top mix basic slag at the rate of 5oz. to the square yard and kainit at 4oz. to the same area, preferably before the end of December. The other things which you name will be better used as stimulants when the plants are in full progress.

BELLADONNA LILY NOT FLOWERING (Col. F. W. B.).—The only reason we can advance for Amaryllis Belladonna not flowering as usual is that the weather last spring was not very favourable to growth, and the weather later in the year was unfavourable to ripening. We have heard of other failures this year. Possibly your plants will flower quite well next autumn.

PEONIES (Rema).—We do not recommend the watering of Peonies during the winter season in a general way, though it is almost impossible to pay them too much attention during that period in respect to liquid manure. That is to say, it may be applied once every ten days during open weather, and in the case of light soils more particularly will leave its mark on the subsequent growth of spring. They, again, in the spring of the year, and when much dry weather is experienced between April and the flowering season, copious waterings should be given to develop growth and flowers.

POLYGONUM BALSCHUANICUM LEAVES DISEASED (G. W.).—The leaves of your Polygonum are injured by mildew, which has probably resulted from the recent cold and wet. If not attended to, the disease is likely to appear again next summer. You cannot do better than spray your plant at once with Bordeaux mixture, prepared as follows: Take 3lb. of copper sulphate and 2lb. of quicklime. Dissolve the copper sulphate in a little hot water in a wooden vessel; then in another vessel slake the lime. Pour the lime-water into the sulphate and make up to twenty-five gallons with clear water. Stir well and use. After the spraying, prune the branches back and burn the prunings. Next spring, when the leaves are bursting, spray the plant twice, at intervals of a fortnight, with the same mixture. This will kill any fungus spores which may be present. The plant would flower better in a sunnier position.

EASILY-GROWN HERBACEOUS PLANTS (A. A. L.).—Without knowing for what purpose the plants are intended, it is not easy to give a satisfactory list, though the following are all good and of easy cultivation: Adonis amurensis vernalis, Anemone Pulsatilla, Arceuthobium, Aster subcæruleus, A. Amellus, A. alpinus albus, A. a. roseus, Anemone sylvestris, A. japonica alba, A. J. rosea, Aquilegia Skinneri, A. chrysantha, A. cærulea, Arabis alba flore pleno, Armeria plantaginea rosea, Aubrietia Dr. Mules, A. Moerhousii, A. Fire King, Campanula persicifolia alba plena, C. p. alba coronata, C. Hendersonii, C. carpatia Riverslea, C. c. alba, Primula Sieboldi, P. bulleyana, P. pulverulenta, P. rosea, P. cashmiriana alba, Saxifraga bathoniensis, S. cordifolia purpurea, Gypsophila paniculata, G. p. flore pleno, Geum Heldreichii, Helenium cupreum and Hemerocallis Dumortieri. If these are not suitable, please write again, stating your requirements more definitely.

TREES AND SHRUBS.

CLIPPED YEW TURNING BROWN (Ilex).—We cannot suggest a reason for the upper part of your Yew tree turning brown, unless some injury has occurred to the branches below the point where the discoloured leaves begin. If you examine the plant, you may easily ascertain whether such is the case by removing a little of the bark with a sharp knife. If the bark appears fresh and full of

moisture, then the falling and browning of the leaves can only be due to some local condition, which may not be of a serious nature; but if the cut surface appears brownish and dry, there will be no possibility of saving the affected parts. It is not advisable to feed too liberally if the plant is growing in a border.

PRIVET HEDGE (A. B. C.).—A hedge of Oval-leaved Privet ought to answer satisfactorily in the position you describe. Both horses and cattle will eat Privet if allowed, but if there are no fields adjoining, we do not think that cattle passing along the road would cause injury. A Holly hedge would have the best appearance, but it would be more expensive and take a longer time to grow to the desired height and thickness. Privet has one failing, namely, it is more easily broken by boys or animals than such things as Thorn and Holly. You will, however, be able to decide whether a very strong hedge is necessary or not.

ADVICE ABOUT A CRAB APPLE TREE (Ilex).—The fruits sent for determination appear to be those of *Pyrus Malus coccinea*, although they may belong to one of the many varieties of Crab Apple, which show very small variations from each other and have no distinguishing names. From what is said about the condition of the trees, coupled with the condition of the roots sent for examination, we have no hesitation in saying that the plant is dying fast, and that there is no possible chance of its recovery. The sections of roots are dead and full of fungus, and we suspect that the same fungus is present in the trunk. The best plan would be to remove and burn the tree and its roots, and start again in a different place with a young plant.

COPPER BEECHES ATTACKED BY BEECH COCCUS (Rev. R. W. C. H.).—Your Beech trees are evidently infested with the Beech coccus (*Cryptococcus fagi*), which is a very unsightly disease, although it is doubtful whether it does the amount of harm which is often credited to it. Beech trees which are sometimes said to have been killed by coccus have really been killed by fungus, the coccus being a secondary consideration. However, it is a good plan to clean the trees, and as you apparently have not many specimens, you had better have them scrubbed with a stiff scrubbing-brush with a paraffin wash. The wash may be made by taking 2lb. of soft soap and dissolving it in two gallons of boiling water. Into this pour a gallon of paraffin, stir with the soapy water until a creamy liquid is formed; then make up to twenty gallons with warm water. While the scrubbing is in progress, keep the wash well stirred. For spraying purposes, 2lb. of caustic soda, 98 per cent., may be added. The mixture is very penetrating, and it should only be used through a spraying-machine on a calm day, for if any of the liquid comes in contact with the skin of hands or face, it has a drying or burning effect on it. The paraffin wash causes no ill-effects.

ROSE GARDEN.

SOIL FOR ROSE-GROWING (Quizz).—The sample of soil is fairly good. It will need to be enriched with some good manure—preferably cow or pig—and if you can obtain some top soil from a pasture, we should advise you to add some of this also. Try to provide a depth of fully 2 feet of good soil, and break up the chalk subsoil; then we think you would be able to grow good Roses.

ROSES FOR PARTIAL SHADE (W. B. P.).—You must avoid planting the very double kinds in such a position. A very good dozen would be "Betty," "La Tasca," "Pharisæer," "Melanie Soupert," "Laurent Carle," "Gustave Regis," "Grace Molyneux," "Mme. Antoine Mari," "General Macarthur," "Frau Karl Druschki," "Lady Hillingdon" and "Mme. Hoste." Those marked with an asterisk would make good standards.

PRUNING RAMBLER ROSES (F. B.).—You are quite right. The growths you have marked are called laterals. You must not, however, prune them now. March is the time to do this. If the plants are too large for their position, cut out one or two of the oldest main growths, and then open out the plants in a fan-like manner if you can. The Michaelmas Daisies should be divided each year and replanted; then we think you would have very little mildew.

PRUNING A NEGLECTED ROSE (W. T. J.).—Rose Margaret Dickson is often used as a pillar plant by placing a 6-foot pole to it and tying up the growths. If you care to do this, you should cut one of the long growths down low so as to encourage basal growths, and this could be done now. Another method would be to cut away all growths except one of the main stems, and treat the Rose as a standard. The small growths at the top, if cut back hard, would break out stronger next year and would soon make a nice head. Of course, all growths coming from the main stem should be suppressed.

ROSE FOLIAGE AND RED RUST (R. H. G.).—The foliage is badly attacked by orange fungus, which has been particularly rife this year. We do not anticipate any serious injury to the plants beyond prematurely defoliating them, and we cannot advise you to do anything now save collecting fallen leaves and burning them. Next season spray early with potassium sulphide at the rate of 1oz. to 10 gallons of water, and as the leaves become harder, decrease the water to 5 gallons to 1oz. of the sulphide. Removing 1 inch or 2 inches of the top soil in winter and burning it would destroy many of the winter spores, although contagion is possible again in spring from the hedge Roses, which are frequently badly affected.

THE BEST NEW ROSES OF 1911 (Trent Bridge).—We can quite understand your desire to obtain only the best novelties that are really advances upon existing kinds.

We have proved the following to be very good: Countess of Shaftesbury, Leslie Holland, Mrs. Charles E. Allen, Edward Mawley, Mrs. Amy Hammond, Florence H. Veitch, Reuerio A. Pulfuff, Alexander Hill Gray, Carrie, Duchess of Westminster, Fernhurst, Lady Grenall, Mabel Drew, Melody, Mrs. Cornwallis-West, President Vignet, Mme. L. Baket, Germaine Chenauet, Mme. Jules Bouche, Mrs. E. Powell, Mrs. George Shawyer, Nathalie Bottoer, Mayflower and May Miller.

THE GREENHOUSE.

TREE TOMATO (A. J. V.).—The Tree Tomato (*Cyphomandra betacea*) is a small tree, reaching a height of about twelve feet. It will flourish in an ordinary greenhouse temperature in a mixture of loam and leaf-mould. The greenish flowers are produced in long, pendulous racemes, the buds being purple. The fruit when ripe is red and egg-shaped, and is quite edible, resembling a Tomato in flavour. It is a native of Southern Brazil.

MALMAISON CARNATIONS (W. R. G.).—The dead leaf-tips may have resulted from check, too much or too little water—the former most probably. The leaves, however, bear evidences of the attack of red spider, and many of the pests are present on the specimen sent. If permitted to increase, this pest will ruin the plants. You should, therefore, either dip or syringe the plants in a solution made of an insecticide and water, a wine-glassful to two gallons. Spraying with soot-water is also good, and salt and water is an excellent deterrent if used in moderation. It is, however, fatal to the plants if rashly used. A tea-cupful only of the salt to three gallons of rain-water would be strong enough, and the plants should be laid on their sides on a mat while the spraying is being done. In employing these things it is the under sides of the leaves where the pest mostly congregates, and which require to be reached if the application is to be of any service. The soil you have been using is too light; employ loam of a somewhat heavier texture and pot very firmly. The Gloire de Lorraine Begonias have been grown in too high a temperature, and have also suffered from the attacks of thrips, usually the result of too dry a temperature. We detect no fungus on the other leaf sent, and if there is evidence of disease, cut the affected leaves and burn them.

CACTI (M. R.).—You give us no idea of the accommodation available for Cacti, whether you intend to devote a greenhouse or part of a greenhouse to their culture, or purpose growing them in a sunny window. The Phyllocacti are among the showiest and most free-flowering of all Cacti, and a fair proportion of them must be included in any selection. They flower during the summer months. The raisers of these as a rule give their own names, so that, in ordering from a specialist in succulents, the better plan will be to leave the selection to him, stipulating for distinct varieties. On no account must the variety German Empress be omitted, as the flowers, though smaller than the others, are of a delightful shade of pink, and are borne in the greatest profusion even on small plants. The Rat's-tail Cacti (*Cereus flagelliformis*) is very pretty when suspended, and the long, pendulous shoots are in summer studded with pretty rose-coloured blossoms. Practically the whole of these flower during the summer; but if you have a structure where a winter temperature of 50° to 65° is maintained, you will, during the dull months of the year, be able to enjoy the bright-coloured blossoms of the different varieties of *Epiphyllum truncatum*. All the Cacti above alluded to should be so situated that the temperature of the structure in which they are grown does not fall below 45° on cold winter nights, and at that period they will need but little water. A great deal more, however, may be given during the growing season. A compost made up chiefly of loam, with a mixture of leaf-mould, silver sand and broken brick rubble, will suit most Cacti well.

KITCHEN GARDEN.

INJURY TO CELERY (Anxious).—The Celery leaves are attacked by a fungus, and nothing is likely to effectively check the pest now it has gained a hold. Picking off the diseased leaves and spraying the remainder with Bordeaux mixture may do some good; but another year see that you get fresh seeds, grow the plants as far as possible away from the position occupied at present, and spray with Bordeaux mixture at intervals if the first sign of the disease manifests itself. Do not throw the diseased plants or refuse on the rubbish heap. Burn them.

TOMATO PLANTS GONE WRONG (R. G.).—Your plants are evidently well grown and well fruited. On first examining them we suspected the cause to be an attack of fungi, but on closer inspection we are satisfied that it is not, but is the result of some cultural defect, the most likely being the too rich and too wet condition of the soil and the too humid, cold and close atmosphere. Before the border has any more water given to it, let it become fairly dry (but not dry enough to cause the plants to flag), then take off the surface soil to the depth of a couple of inches and replace with a top-dressing of loam to which have been added three pints of lime and one pint of bone-meal to the barrow-load of loam. In applying, press firmly down, and give a good watering with clear water. Ventilate freely day and night, and apply enough heat (from the hot-water pipes) to create a gentle warmth and always keep a buoyant circulation of the air. Destroy all the affected fruits and paint the partly-affected stems with sulphur and water. Those badly affected must be cut off and new stem growth encouraged by careful culture. The plants have not been scorched.

FRUIT GARDEN.

APPLE SUCKERS (*Rajus*).—The only successful way to destroy such suckers is to carefully expose the roots from which they spring by clearing away the soil, and then cut off the suckers close to the roots.

FRUIT TREES IN CLAY AND CHALK (*H. M. T.*).—Fruit trees like chalk. If your soil is trenched and a liberal quantity of well-rotted farmyard manure applied at the time of trenching, there is no reason why Apples, Pears and Plums should not succeed fairly well in such a soil, so long as it is well drained.

ESPALIER AND CORDON FRUIT TREES (*Beauty of Bath*).—We think that Pears would do very well on the west side of your espalier wire fence, and Gooseberries as you suggest on the east side. You cannot grow fruit trees on both sides of an open wire fence. The fence should be 6 feet high, and we think that fan-shaped Pear trees would cover it better for you in time and be more profitable than the cordon-trained trees. As regards the Gooseberries for the eastern aspect, we recommend double cordon-trained trees.

APPLE TREES CANKERED (*Ilex*).—From what you say about your old Apple trees we imagine that they are not a source of profit, for what fruits are produced are poor in quality. Therefore we have no hesitation in advising you to destroy them and start again with young stock. Old fruit trees often have a picturesque appearance, but it is a mistake to let sentiment step in when such trees occupy positions in gardens and orchards where the room they occupy might be given over to young trees which would bear well-developed fruit. Such trees, which are full of disease, are also a source of injury to others, for fungus spores spread from the cankered areas to young trees, and they in time become uskers.

MISCELLANEOUS.

WATSONIAS (*Alice Knox*).—You have done what is right in drying the plants off, provided it was not brought about suddenly and has not been carried to extremes. These plants do not require to be dried off like Tulips, for example, seeing that under cultivation some roots remain more or less active.

YARROW ON LAWN (*C. H. S.*).—The best way to get rid of the Yarrow (*Achillea Millefolium*), from your lawn is to pull it out. This is rather tedious work; but you say that you have not much of it. Some people sow Yarrow with Grass on lawns, as it stands the hot weather well and keeps green very much longer than grass. It is certainly a less noxious weed than the Plantain.

CHIVES AND ALMOND TREES (*W. E. T.*).—Chives are chiefly useful as substitutes for Onions when these are scarce. It is a British plant, quite hardy, and will succeed in any ordinary garden soil. Once planted, it is well not to disturb it for at least three or four years. After this time the clumps should be divided or replanted in fresh soil. They may be replanted any time between the end of October and the end of March; but towards the end of February is the best time. Your Almond trees must be growing too strong, and while this is the case the trees will neither flower nor bear fruit freely. The best way of treating them will be to root-prune the trees, cutting back all the strongest of the roots by one-third their length. The easiest way of doing this will be by lifting the trees out of the ground and replanting again immediately the root-pruning has been done.

SAXIFRAGES AND JAMES ATKINS OF PAINSWICK (*R. B. C.*).—The late James Atkins of Painswick lived for many years at Rose Cottage, where his unrivalled collection of Saxifrages and other plants attracted specialists from all parts. Entering the village from the direction of Cheltenham, the house was a little removed from the main road on the right hand. The collection of plants in its entirety, we believe, came into the hands of Messrs. Paul and Son twenty-five or more years ago. The early hardy Cyclamen, *C. Coum*, *C. ibericum* and *C. Atkinsii* were a great feature of the garden, though the choicest gem of all—and virtually a comparative weed, seeing that it travelled far and wide—was *Omphalodes Lucilia*. To such an extent was this the fact that in 1883 or 1884 the writer of the note in question was the recipient of a big clump of it, and many more like it could have been lifted at the time. Unfortunately, the plant resented interference in autumn, and equally so, probably, the often fatal error of planting such things intact in big clumps, and, without any attempt at re-rooting, pined and died a few months later. The memory of the plants in the Painswick gardens, however, will never fade.

FUNGUS ON LAWNS (*Cove*).—We presume that the fungus you refer to grows in a circle, thereby causing bare areas in your lawn. These circles are usually called fairy rings, and are often caused by a species of Agaricus. The harm is usually done before any of the Toadstools are noticed, for the white mycelium of the fungus is at work below ground long before the visible fruiting stage appears. Still, some good may be done by collecting and burning the Toadstools to check the spread of spores. To kill the mycelium the ground should be thoroughly soaked to a depth of 9 inches or 12 inches with a solution of sulphate of iron. This may be prepared by dissolving 8lb. of sulphate of iron in thirty gallons of water and applying when the ground is damp. It must be remembered, however, that it is no use applying the mixture unless the ground is thoroughly soaked. A week after using the sulphate of iron give the patches a dressing of lime, dig them over, and sow grass seed or fill up with new turf. Another way of dealing with the pest is to remove the soil to a depth of 12 inches and fill up with new soil. The old soil may be spread on cultivated land, but not on grass.

Whether using the sulphate of iron or removing the soil, take care to carry the work a few inches beyond the outer line of the circle, for the mycelium always spreads in an outward direction. The present is a good time for the work.

NAMES OF FRUIT.—*E. M. A.*—1, Marie Guise should be picked early in October and be ripe in December; 2, Winter Nells, should be picked early in October and be ready for use in December and January.

NAMES OF PLANTS.—*S. P., Denbighshire.*—1, *Begonia Dregei*; 2, *B. Ferdinand de Lesseps*; 3, *B. carinata*; 4, *B. Luzerna*; 5, *B. fuchsoides*; 6, *Nephridium molle*; 7, *Polypodium membranacea*; 8, *Adiantum euneatum Paecilii*; 9, *A. pedatum*; 10, *Asplenium bulbiferum* variety; 11, *Pteris longifolia Mariessii*; 12, *Cyperus alternifolius*.—*L. W., Hoo.*—*Phytolacca decandra* (*Virginian Pokeweed*).—*L. Barron.*—*Agathaea coelestis*.

SOCIETIES.

NORFOLK AND NORWICH CHRYSANTHEMUM SHOW.

HELD in St. Andrew's Hall, Norwich, on November 21, 22 and 23, this fixture proved to be a great success. There seemed to be no tendency (in spite of the critical remarks of some writers) to dispense with the large Japanese blooms. Here they were quite as good as ever, and some even better. Incurves and Pompons seem to be losing favour with growers; but, on the other hand, singles and naturally-grown Japanese flowers are gaining popularity. Pot plants were a good feature, and the artistic arrangement of the circular groups was very marked, as also were the baskets, vases and table decorations. Other flowers were in profusion. Fruit was a very strong section, more especially the Apples. The wet season had been evidently beneficial to the vegetables, which were in larger numbers and much better in quality than last season. Mr. Cozens-Hardy achieved a marked success with Potatoes, winning in strong competition six firsts with only eight entries.

The seedsmen of the district and elsewhere offered prizes, the classes for which were keenly contested. The trade growers contributed largely to the beauty of the display. Foremost came the firm of Messrs. Daniels Brothers, Limited, Norwich, who did themselves great credit with a fine and educational exhibit. Hobbies, Limited, Dereham, had a large show of Chrysanthemums, Roses and Dahlias, and visitors were delighted with the arrangement. Messrs. Sutton and Soos, Reading, had a characteristic "Sutton" display of vegetables and such-like. Messrs. Wells, Merstham, had a bold bank of Chrysanthemums consisting of up-to-date kinds.

In dealing briefly with the winners, we mention first the class for a circular group of Chrysanthemums and foliage plants. Here Mr. T. Notley, gardener to E. G. Buxton, Esq., Catton Hall, won for the third year in succession, and secures the cup as his own property. For forty-eight Japanese, Sir Carl Meyer was first; but the best bloom in the show was in the second prize lot from Sir S. Neumann, the variety being *F. S. Vallis*. For thirty-five blooms, T. A. Rising, Esq., was first; while for twelve distinct Sir G. Lacon took the premier award. For six blooms, one variety, white, Sir S. Neumann, with fine blooms of *W. Turner*, and also for six blooms of any other colour, with *F. S. Vallis*, took both firsts. The best incurves came from Mr. W. Chettleburgh, gardener to Colonel Rous, Worstead, his blooms of Mrs. H. J. Hygate being very fine. He also staged a beautiful bright yellow sport from this same variety which he calls *The Colonel*. Mr. H. Cockerell, gardener to G. E. White, Esq., Eaton, won the premier prize for naturally-grown flowers, also for singles. Mr. W. Hilson, gardener to Sir F. Adair, had the best collection of cut exotic flowers. Carnations were exceedingly well shown by the veteran gardener at Gunton Park, Mr. W. Allan. He can usually hold his own with this flower, as well as being a great fruit-grower. The pot plants of *Begonia Gloire de Lorraine* from Dr. Osborne, Catton, were marvels of excellence. Mr. F. Enderby, gardener to J. H. Gurney, Esq., Keswick, had the best plants of Cyclamen, and his Violets, too, were very fine.

Mr. T. Simpson, gardener to the Earl of Stradbroke, Henham Hall, distinguished himself in the Apple classes, winning firsts for a collection of dessert and for a collection of kitchen Apples. The best single dish of Cox's Orange Pippin came from Mr. W. Allan; while for a single dish, any other variety, the lot of Allingtons staged by Mr. George Davison, gardener to Colonel Petre, Westwick, were models of excellence. Mr. Davison excelled in all the Pear classes. His *Doyenné du Comice* did one good to gaze upon. Grapes were not quite so good as we have seen them. The best three bunches of Alicante came from Mr. E. Greene, gardener to Edmund Reeve, Esq., Catton Grange. Mr. W. Allan's bunch of Gros Colmar was easily first for a single bunch, and he also won first for a white bunch with a grand example of Muscat of Alexandria.

In vegetables good collections were put up by Miss Langworthy, the Hon. A. E. Fellowes and Mr. W. Chettleburgh. Mr. A. Woodhouse, gardener to Sir H. C. Engleman, Saffron Walden, had a grand lot of Carnations, such as one does not often see at Norwich. Messrs. F. Smith and Co., Woodbridge, were well represented by a lot of fine vegetables. Besides those mentioned, there were a few others who had smaller collections.

The energetic hon. secretary, Mr. C. E. Pilling, endeavoured to see everything well placed, and is to be congratulated upon the smooth way in which his plans worked.

NATIONAL CHRYSANTHEMUM SOCIETY.

AN exhibition of Chrysanthemums was held under the auspices of the above society at Essex Hall, Essex Street, Strand, London, W.C., on Wednesday, November 20, in consequence of the earliness of the great autumn show held at the Crystal Palace on October 29, 30 and 31 last. The present show was primarily to give growers of incurved Chrysanthemums an opportunity of exhibiting their flowers at their best, and also that market-growers might make a good representation of their wares to Londoners and growers generally. The meeting was a distinct success. The larger hall was filled to its utmost capacity, and the show was well patronised by the public until the closing hour of 9.30 p.m.

The groups of cut flowers from the trade were, as usual, an outstanding feature of this society's show. Mr. Norman Davis, Framfield, Sussex, again excelled, winning a large gold medal for Chrysanthemums of all types of the flower, represented by fresh, highly-coloured specimens of splendid quality. Here were to be seen grand examples of Japanese, Lady Talbot, Mrs. Gilbert Drabble, December Gold, William Turner, Frank Payne, E. G. Moetta, Edith Jamieson and its sport A. M. Falkner. Singles were splendid, notably Mensa, the new Royalty, Agnes, Pole Star and Pictor. Incurved sorts were seen in Maritana and Durbar; and Pompons by White Baby, Baby, Snowdrop and others. The new white Anemone-flowered Godfrey's Perfection was also exhibited.

A gold medal was awarded to Mr. Philip Ladds, Swanley Junction, for a charming display of Chrysanthemums set up in bold groups of cut flowers on large stands. The flowers were grown as for market, and contained many excellent specimens of such Japanese sorts as Mme. P. Radaell and its yellow sport, Mme. G. Rivol, December Gold, W. Turner, Framfield Pink and Freda Bedford. There were also good singles, notably the new Bronze-Beauty, the yellow Ethel Mortimer and Mensa. The grouping left nothing to be desired.

Messrs. Cragg, Harrison and Cragg, Heston, Hounslow, Middlesex, staged a remarkably fine group of market-grown Chrysanthemums, arranged attractively in vases. Standard sorts and novelties were freely displayed, and the exhibit well merited the gold medal awarded to it. Some of the better Japanese sorts were Freda Bedford, Mr. F. McNiece, D. Ingamells, F. Cooper, Ethel Thorp, Foxhunter, Mary Godfrey, Mrs. Buckbee, December Gold (superb) and Miss Olive Dumsday. Singles were remarkably handsome, notably Jessica, Mensa, Portia, Mrs. W. G. Patching, Lemon Queen, Edith Pagram, Pink Beauty, Mrs. W. Garner, Mrs. W. Wells and several new sorts.

A small gold medal was awarded to Messrs. W. Wells and Co., Limited, Merstham, Surrey, for a group of cut flowers set up on the front of the platform. Bold masses of the new white Japanese, Queen Mary, were the centre of attraction, and examples of F. Jolliffe, H. Luxford, William Turner and Mrs. G. Drabble were also conspicuous. Messrs. Godfrey and Son, Exmouth, had a small exhibit of their new Anemone-flowered Chrysanthemum Godfrey's Perfection, which is a flower of fine decorative quality.

In the competitive displays the most important class was that for thirty-six incurved blooms, distinct, in competition for the Holmes' Memorial Challenge Cup. There were three exhibitors, and the veteran grower, Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashstead Park, Epsom, was an easy first, showing large, well-flushed specimens in good order and condition. The more conspicuous examples were Clara Wells, Souv. de William Cibrac, H. Hearn, Eva Smith, G. H. Evans, Miss M. Lyne, W. Pascoe, Duchess of Fife, Doris Raynor, Ethel Thorp, Colonel Kekewich, Embleme Putevine, Mrs. W. H. Jones, The Egyptian, Amber Beauty (superb), Miss N. Threlfall, Le Peyton, Marjorie Shield, Mrs. G. Denyer, Mme. Vrembley and May Phillips. The second prize was awarded to Mr. J. Broom, gardener to Miss Loagworthy, Gays House, Holyport, with smaller and less even blooms; and third prize was secured by Mr. J. Simon, gardener to Mr. W. W. Mann, Ravenswood, Bexley Heath, with large, rather rough specimens.

For a vase of singles, from which the trade were excluded, Mr. Loo Thomson, Alisa Craig, Formby, Liverpool, was placed first out of six competitors with a grand lot of ideal flowers. The second prize was secured by Mr. L. Lawrence, Shoreham, Kent, also with a splendid collection of blooms.

Great interest centred around the competition for the best new single Chrysanthemum exhibited before the floral committee on this occasion. The novelty must not be a sport, and must not be in commerce. In the end Messrs. Cragg, Harrison and Cragg's Portia, a large-flowered single, was adjudged first, and well merited the distinction.

NEW VARIETIES.

Thirty-six new Chrysanthemums were submitted for adjudication by the floral committee, and apparently a high standard was observed in making awards to most cases. The following varieties were recognised:

FIRST-CLASS CERTIFICATES.

Prince of Wales.—This is a large, full, exhibition Japanese bloom of considerable substance, having broad florets of good length that recurve in fairly even fashion. Colour, deep crimson, with bronze reverse. Shown by Mr. Norman Davis, Framfield, Sussex.

Royalty.—A dainty, free-flowering single variety rather less than three inches in diameter. Florets of good breadth, neatly disposed. Colour, bright rich crimson, with yellow disc. This flower has two rows of florets. From Mr. N. Davis.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

What to do With Frozen Plants.—If plants in a greenhouse or frame have been inadvertently frozen, they should be thawed as slowly as possible. Shade the house or frame heavily and syringe all the plants with ice-cold water until all frost has been dispersed. It is sudden thawing, more than the actual freezing, that does the damage.

A Spring Show of Roses.—It is gratifying to know that the National Rose Society has decided to hold a spring show next year in the Royal Horticultural Society's Hall at Westminster. The date fixed is Thursday, May 1. The forcing of Roses is now so largely adopted that we feel sure this new venture will meet with success. The annual general meeting of the members of the National Rose Society will be held at the Holborn Restaurant on Tuesday, the 17th inst.

Mistletoe on Pear.—It is a curious fact that Mistletoe, which is a common parasite on the Apple, is rarely, if ever, found growing naturally on the Pear. At a recent meeting of the scientific committee of the Royal Horticultural Society, Sir Harry Veitch, V.M.H., sent two branches of Pear in which Mistletoe had been sown, to illustrate the difficulty experienced in getting the parasite to establish itself on that tree. In both cases the seed had germinated, but the branches had died, and they were typical of all the infections tried.

The Glastonbury Thorn.—From various sources we have lately heard of the flowering of the Glastonbury Thorn (*Crataegus Oxyacantha præcox*), and a tree at Kew may now be seen in full flower. Mr. W. E. Ledger recently showed flowers of this well-known Thorn from his garden at Wimbledon at a meeting of the scientific committee of the Royal Horticultural Society. The flowers are borne on short shoots, which have no definite resting period as in the normal form of the species. The committee could call to mind no analogous cases among Apples or Pears, and would be glad to learn of any such that may be known.

Eucryphia pinnatifida.—One is more accustomed to see this beautiful Chilean shrub in the sheltered gardens around or near the coast, where it is usually quite a success. It may assist not a few, however, to give it a trial in more inland places when it is stated that in the Royal Horticultural Society's Gardens at Wisley a handsome specimen 8 feet or 10 feet high has been flowering well during recent weeks. Of its beauty and distinctness among evergreen flowering shrubs there were never any two opinions, and to-day its more complete hardiness is but a question of position and experiment. The great saucer-like flowers are white, to which the brown anthers are in fine contrast.

Orders for Roses.—We understand that many of the leading Rose nurserymen are inundated with orders at the present time, and that it is almost impossible in some instances to cope with them as promptly as they would wish; consequently, customers whose orders have not been executed quite so promptly as usual are disposed to grumble. We would remind such that a nurseryman must, in fairness to all, execute orders in rotation, and that those who have a reputation to maintain will do their utmost to despatch the Roses at the earliest possible moment. A little consideration by customers at this the busiest season of the year would, we feel sure, be very highly appreciated by nurserymen.

Colour Pigment in *Primula sinensis*.—The current issue of the *Journal of Genetics*, published by the Cambridge University Press, contains a very learned treatise by Professors Keeble and Armstrong on the rôle of oxydases in the formation of the Anthocyan pigment in plants, Chinese Primulas and Sweet Williams being the principal kinds dealt with. Those of our readers who are keenly interested in deep scientific research would find this treatise of considerable value. Of quite another character is a long and very technical treatise by A. H. Trow on "The Inheritance of Certain Characters in the Common Groundsel and its Segregates." The principal use of this troublesome weed is to provide green food for canaries; hence no doubt this treatise will be exceptionally valuable to breeders of these birds. Perhaps we may soon have a learned and lengthy treatise on the variations and spreading characteristics of Chickweed.

Ceanothus Perle Rose.—The various sorts of Ceanothuses which flower during late summer and autumn are mostly varieties obtained by crossing *C. americanus* and *C. azureus*. All may be considered quite hardy in most parts of the country in the open, for though during severe winters the ends of the young shoots may be killed, they break up freely from the base in spring. The usual method of culture with these late-flowering Ceanothuses is to grow them in bush form in the open, though they may be also planted against a wall or fence. They bear larger inflorescences than the spring-flowering species, and the selection of colours available is much more varied. One of the best varieties is Perle Rose, which has large heads of beautiful rich rose-coloured flowers. This Ceanothus and the companion varieties comprise some of our most showy autumn-flowering shrubs, a season when flowers are by no means common in the tree and shrub department. To complete a useful selection of six varieties, the following should be grown: Gloire de Versailles, light blue; Arnoldii, greyish blue; Indigo, deep blue; Ceres, pale rose; and Gloire de Plantières, blue.

CORRESPONDENCE.

The Editor is not responsible for the opinions expressed by correspondents.)

Scented Chrysanthemums.—Over thirty years ago, a then old variety—Progne, a reflexed flower of a rich purple colour—was much grown, one reason for this being that the blossoms had a pleasing Violet-like fragrance.—H. P.

— Noting your remarks *re* "Fragrance in Chrysanthemums," page 578, I would like to draw attention to the claims of the pink single Ladysmith. At the recent Brighton Show, the fragrance of specimen plants of this variety was very distinctly noticeable as one walked past the rows, and I have long considered this as an additional reason for growing large quantities of this variety for cutting.—C. ASHTAD.

— *Re* a note on the "Fragrance of Chrysanthemums," November 30, page 578, by C. Turner, I remember growing a Chrysanthemum called Progne, an old favourite of mine, very sweet-scented, like Violets, deep claret in colour and a most useful variety for decorative purposes; but I have lost sight of it for years. Mrs. Langtry and Mensa, both single kinds, are sweet-scented.—W. DRIVER, Stonehouse, Gloucestershire.

The Rockspray.—Sometimes a popular name as applied to an entire genus is very misleading, though particularly appropriate to a few of the species. This is very noticeable in the case of the Rockspray, which has of late years been applied to the Cotoneaster family. No fault whatever can be found against using it in the case of many members of the genus, such as *C. microphylla*, *C. humifusa*, *C. horizontalis* and others; but when applied to such as *C. frigida*, which is really a large shrub or small tree, the reason of the name is by no means evident, and might be severely criticised.—H. P.

Winter Effects of Flower and Shrub.—In the article on this subject on page 587 by that most interesting and authoritative writer Miss Jekyll, no mention is made of the Prickly Heath (*Pernettya mucronata*). Her list is so full that the omission of this plant was the more noticeable. Was it an oversight, or does it not thrive with her? Individual plants, nicely berried, are most handsome, while a bed of plants would be still more so. The colour of the berries varies somewhat, but is usually of a deep or dull pink shade, which, owing to the very small, dark green leaves of the plant, is plainly seen. There should be no hesitancy in classing this as one of the most ornamental of our outside winter plants.—C. T., Highgate, N.

The Deciduous Cypress Fruiting.—I was very much interested in reading the notes by "W. D." and "G. G." in THE GARDEN for November 9, page 562, about the Deciduous Cypress fruiting. In the pleasure grounds of Standish House, Stonehouse, Gloucestershire, there is a nice specimen of the Deciduous Cypress, bearing fruits near the top of the tree. No doubt the Cypress naturally likes a damp situation; it is growing quite close to the fish pond, and many roots can be seen at the edge of the pond. I believe the late Mr. Richard Potter planted the tree about fifty years ago. He extended the gardens and improved the place during his long residence at Standish. I also remember seeing the Deciduous Cypress referred to by "W. D." at Syon House, Brentford, being employed in the gardens there during 1865 and 1866 as under-gardener.—WILLIAM DRIVER, Stonehouse, Gloucestershire.

Primula Forbesii as a Cut Flower.—A prolonged acquaintance with this beautiful little *Primula* has enabled me to learn and appreciate its good qualities as a cut flower. I am almost inclined to think that I like it better than *P. malacoides*, especially since I have grown both the lighter and darker shades. They blend so well together when nicely and lightly arranged in suitable vases. They always keep in good condition for a fortnight when cut, but it is only fair to say I have no gas in my house. I had an exquisite vase on my dinner-table last week. There was a sort of undergrowth of the mealy form of *P. kewensis* with a few flowers fully open, and under it, as a sort of guard petals, some Maidenhair. The top growth was all *P. Forbesii*, the darker deep ruby red ones predominating. As this was my house-keeper's arrangement, and as I knew nothing about it until it was a *fait accompli*, I feel I may say a word in its praise.—JOSEPH JACOB.

Sweet-scented Verbena for Low Greenhouse Wall.—I agree with Mrs. Earle ("Pot Pourri from a Surrey Garden") in wondering why Sweet Verbena (*Aloysia citriodora*) is comparatively seldom planted out of doors. Taking the hint from the above-named book, I have had some of these delicious little plants put out against a greenhouse wall. They survived last winter admirably, and have grown into large, healthy bushes. As soon as the frosts commence, the long stems are cut down almost to the ground and the shrub is packed with dead leaves piled up high over it, the leaves being kept in place by wire-netting. With other half-hardy plants requiring a warm wall, together with large-flowered limbing Roses, such as Reine Olga de Wurtemberg, Ards Pillar, Climbing La France, Climbing Caroline Testout, Bardou Job, &c., one can do much to beautify the ugly low walls of a greenhouse. With me the above-mentioned Roses flower almost continuously for four or five months or more, retaining their foliage until well after Christmas.—ELEANOR G. SHELLEY, Avington Park, Alresford, Hants.

Saxifraga oppositifolia in its Native Haunts.—Most interesting is Mr. Reginald A. Malby's note (page 604) and very charming the photograph (page 603) of one of the fairest of alpine gems. Though we do not all of us possess "rugged desolations of weathered rocks" over nine thousand feet above sea-level, we can grow this bright mountain plant with very considerable, if not perfect, success. In 1910 I grew good tufts of it on a southern slope of ordinary loam, the roots slightly protected by nothing more than weathered flints. However, in the drought of last year most of the tufts were scorched up. This year I have largely followed Mr. Malby's ideas and put in my plants so that their roots will have a deep root-run on the cool side of rocks of from 2cwt. to 3cwt. each. As the rocks are nearly flush with the soil, I expect that the dark green leaves will spread over them, and I only hope they will be mantled with as much beauty as those in Mr. Malby's photograph. The first time I saw *S. oppositifolia* growing wild was in Norway in the *débris* of the moraine at the foot of the Kjendalsbræ Glacier. This was not much above sea-level. This and other plants had been brought down by glacial action. Had I been able to ascend the glacier, I might have found *S. oppositifolia* revelling in "undulating cascades" on the lofty, rocky slopes of Jostedalsbræ. As it was, I brought home the few specimen plants, but they, too, were scorched up in the drought of last year.—G. H. ADDY, Ightham, Kent.

A Live Garden Shelter.—The note and illustration on this subject, page 569, issue November 9, recalled to mind some very interesting and ornamental flower-beds in a garden under my charge a few years since. The beds were circular and about four feet in diameter. Instead of living withes, Hazel sticks were used in the same manner as illustrated, a stout central stake being used in the centre to keep the whole in a rigid condition. The height of the central stake was about five feet from the ground-level. At the base of the Hazel sticks, Ivy-leaved Pelargoniums, Heliotrope and Tropæolums were planted for producing a summer display. There are other subjects just as good for this scheme, but the above were used in our case as being particularly suitable for the general bedding arrangement. Where a large number of beds of geometrical design have to be planted, as, for instance, an Italian garden, a few beds planted thus will prove invaluable.—COLIN RUSE, Lambay Island.

The Relative Value of Manures.—While travelling in Wales last summer I happened to meet an old countryman, over whose garden I was shown. In the course of conversation with him I enquired as to what manure he used to obtain such splendid results. His answer was: "Why, horse-manure! I don't believe in your cow and pig manures." I, naturally, enquired why, and this was his logical answer: "A pig is fed to make good meat, a cow to make meat and also milk, but a horse simply feeds to live. Therefore in my thinking horse-manure is the best, owing to the former two animals extracting more goodness from their food than does a horse." I give you the above, of course, for what it is worth, and it would be interesting to hear what your readers think. From what I saw of his produce it was excellent in every respect. He also showed me ten first and eleven second prizes gained in 1911, and I have heard since that he took nearly the same number this year.—B. A. B. [We publish the foregoing letter as indicative of an opinion that is certainly original. We do not think, however, that it is quite as logical as our correspondent thinks. On heavy soil horse-manure would be the best, but on that of a sandy character we would prefer cow or pig manure.—ED.]

Shrubs for Smoky Towns.—A residence of some years in a confined and smoky district of London convinced me that, as stated by your correspondent "W. D.," page 602, evergreens should be planted, but sparingly. The one, however, that gave me the greatest amount of satisfaction is not mentioned, namely, *Fatsia japonica*, or *Aralia Sieboldii* as it is so often called. This, which grew too large for indoors, was planted out, and a very handsome and much admired specimen it made. It did not resent the confined quarters as did many plants, and in time it formed a handsome clump of many stems, all clothed with noble leafage. After winter was over, the leaves were thoroughly sponged with warm soap and water, which, owing to the large leaves and their leathery nature, was really a far less formidable task than may be thought. The only trouble was late in the spring, just as the young leaves were developing, as they were then very liable to be attacked by green fly on the under sides; but syringing with an insecticide cleared them off. The early autumn display of flowers was also very attractive. I write in the past tense, as my present abode is more favourable to plant culture. The common Fig is another first-rate subject for London gardens, not as a fruit tree, but as a bold ornamental deciduous shrub.—H. P.

Solanum crispum (the Potato Tree).—This plant should be grown wherever beautiful flowering shrubs are valued. It is much hardier than is generally supposed, and owing to its quick growth soon forms a large bush. It can be planted in the border in favoured localities, or on a wall where some protection is deemed advisable. A plant on a wall at Lambay has grown from a single shoot a few inches in height to a specimen 8 feet or 9 feet in diameter and 5 feet in height during the past season. A good loamy soil suits this subject.

Abutilon vitifolium.—Seedlings of this plant are frequently disappointing, the colours of the flowers often being very inferior. This plant thrives in the garden at Lambay, both in the open borders and as a wall plant. It is easily increased by cuttings taken from the half-ripened wood in the autumn. Cuttings should be inserted firmly in a sandy compost, and placed in a shady corner of the greenhouse until rooted. Pot off singly and plant out during the following season.—C. R.

A Pretty Autumn Combination.—On page 574, issue November 16, "S. T." has a very interesting note on the above. The *Kniphofias* are, generally, among the most showy of all border plants, and their flowers generally harmonise well with the autumn tints in foliage. The plants are very free in the production of flowers; I have had large clumps which bore flowers during every month of the year. I recently saw a very effective combination of plants in a large border in the grounds of Highcliffe Castle, near Christchurch, Hampshire. *Prunus Pissardi* showed well above handsome clusters of Pampas Grass bearing lovely plumes, and intermixed with these were *Kniphofias* flowering freely. The effect was bold, harmonious and pleasing to the eye, and it was enhanced by the background of large evergreen and deciduous trees and the grey walls of the castle itself.—G. G.

The Californian Tree Poppy.—No plant has given me greater joy than the Californian Tree Poppy, or *Romneya Coulteri*. Its large, white, satiny flowers, produced at more or less irregular intervals from June to September, are always a source of admiration. Occupying as it does a sheltered corner against a wall where it is exposed to the full sun, it is a most desirable plant for the position. I find that it resents disturbance at the roots, like most, if not all, other members of the Poppy Order, and it is most satisfactory to purchase plants in pots for planting. In severe weather this plant needs the protection of some light and dry material, such as Bracken or leaves. In hard winters it may be cut to the ground, but signs of life soon follow, as it invariably breaks away from the base in spring.—S., *Berkshire*.

FORTHCOMING EVENTS.

December 9.—United Horticultural Benefit and Provident Society's Committee Meeting.

December 11.—North of England Horticultural Society's Meeting at Leeds. East Anglian Horticultural Club's Annual Meeting.

December 16.—National Chrysanthemum Society's Executive Committee Meeting at Carr's Restaurant, Strand, at 7 p.m.

December 17.—Royal Horticultural Society's Committee Meeting (no exhibition).

December 19.—Linnean Society's Meeting.

December 30.—Hereford Fruit Show (two days).

January 7, 1913.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster, S.W.

FUMIGATING WITH CYANIDE OF POTASSIUM.

[In Answer to a Correspondent.]

THE formula for the production of hydrocyanic acid is one part cyanide of potassium, two parts sulphuric acid and four parts water. As an insecticide, 1,000 cubic feet of atmospheric space is usually employed as the unit to be filled, and for ordinary greenhouse purposes as low an application as half an ounce of cyanide, 10z. of sulphuric acid and 20z. of water may be used. For mealy bug these must be doubled or even quadrupled if the vegetation is at rest. The stronger the acid, the shorter time must the plants be allowed to suffer exposure. Twenty minutes might do no harm with a strong application, while forty minutes might result in death to very tender plants. The great value of a light application, such as half an ounce or 10z. of cyanide, is that no plant suffers; but the time must not be limited. That is, the house cyanided at night need

exceeding 50°, should be aimed at during the period of cyaniding. The materials are all cheap, but they vary—even water! Before now the writer has had to pay insurance on the sulphuric acid before the railway company would carry it. Near a large town this would not be asked. Beware that no one breathes the fumes of the acid, as it is a deadly poison. In conclusion, be sure the dimensions of the house to be treated are correct. Recently an assistant brought me the dimensions of a house with almost twice the number of cubic feet the structure actually contained. R. P. B.

THE ROSE GARDEN.

NOTES ON THE NEWER ROSES.

HYBRID TEAS FOR EXHIBITION.

(Continued from page 602.)

Mrs. Richard Draper (Hugh Dickson, 1912).—This is a fine Rose. It was awarded the gold medal at the "National" in Regent's Park last year, and will, I think, become very popular. It is likely



FLOWERS OF THE CALIFORNIAN TREE POPPY (*ROMNEYA COULTERI*).

not, nor should not, be reopened till the next morning. We would strongly advise you to use only half an ounce for greenhouse plants and 10z. for such things as Palms, allowing a long exposure. The procedure is very simple. Ascertain how many thousand feet of air the structure contains. If 4,000 feet, say, use 20z. of cyanide with other materials in proportion; but the amount of water need not be limited to the exact quantity; over the quantity does not matter. Get one or more earthen receptacles large enough to contain the material, which sometimes "boils" violently, and apportion an equal quantity to each. First place the proper amount of water in each; then empty in the sulphuric acid. The cyanide of potassium having been wrapped in stout paper, quickly drop each packet into its own receptacle and escape from the structure before evaporation commences. Lock the doors securely, and next morning be cautious not to breathe the internal atmosphere till ventilated anew. A low temperature, not

to be useful as a garden Rose as well as an exhibition sort, as it is very free and has an excellent habit of growth. I saw it in splendid form at Belmont this year. There is plenty of substance in the petals, and is a particularly clean, smooth-looking flower, bright rose pink on the outside, and the inside appears of that pale silvery flesh colour generally associated with La France. The flowers are large and well formed, with a good point. Altogether a most promising variety.

Mrs. Wallace H. Rowe (S. McGredy and Son, 1912).—This Rose has not been given a fair start by the raisers. They send it out with the colour description of Sweet Pea mauve! Mauve may be all right in Sweet Peas, but we do not want it in Roses, and I do not think there is any trace of it in Mrs. Wallace H. Rowe; at any rate, not here in Hampshire. With me the plants I have grown this year have produced some very beautiful flowers. Cerise carmine pink, a combination of true colours, yet a pure self; of great size, and

excellent substance and finish, leaning strongly to the Hybrid Perpetual in both habit of growth and shape of flower, producing three or four buds at the end of each shoot and on shortish footstalks that must be reduced to one bud, which can be the centre or crown bud. I have seen no sign of mildew on the plants. A very useful back-row flower, quite distinct. It has flowered again well in the autumn, and I can recommend it.

St. Helena (B. R. Cant and Sons, 1912).—This was magnificently shown at Southampton by the raisers, and it not only secured a gold medal in the new seedling class, but a flower from a thirty-six box also won the silver medal for the best Hybrid Tea in the show—a very useful performance to stand to the credit of a new Rose for one day's work. It obtains its name not from the small island of Napoleonic fame, but from the lady the Patron Saint of Colchester, and the accent is placed on the first syllable. It is a good, sound colour, cream, with a deep blush in the centre, the open flowers reminiscent of Joseph Hill at its best, but in the half-open or exhibition stage coming with a fine point. I have not grown it,

sorts as Mrs. Herbert Stevens and Molly Sharman Crawford, to name only two, anyone can grow, and they should both be included in collections of Roses, however small.

There are, I find, about a dozen new Teas that come within the limits that I set myself in dealing with exhibition Roses, and of these exactly half come from the Newtownards Nurseries of Messrs. Alex. Dickson and Sons. The others are the products of different firms, none of whom can lay claim to more than one variety, so that Messrs. Alex. Dickson and Sons are far ahead of all competitors, and the debt that they have placed Rose-lovers under is never likely to be adequately discharged; but it sits very lightly on the shoulders of most of us, and we take the good things of the Rose world as they come without troubling anything about the obvious enquiry, "To whom do I owe this?" and acting accordingly. Here is my list of twelve. I do not think I have omitted any that can lay claim to the title of an exhibition Rose, and it is those only that I am now dealing with.

A. Hill Gray (Alex. Dickson and Sons, 1911).—The veteran Tea Rose lover after whom this Rose

Mrs. Foley Hobbs (Alex. Dickson and Sons, 1910).—The best exhibition Tea of recent introduction, most reliable in every way. The raisers call it delicate ivory white; but is ivory ever white? I should prefer to call it pale cream. It is perfect in shape, a good grower, and so easy of cultivation that it should be in every exhibitor's collection. It has won the silver medal for the best Tea oftener than any other variety this season, and for a box of twelve has frequently beaten White Maman Cochet. It has stood out among the new Teas as prominently as George Dickson has among the Hybrid Teas, and one cannot find a fault with it; sweetly perfumed and mildew-proof. It won the gold medal of the National Rose Society at the autumn show in 1910. The young flowers have a beautiful Picotee edging to their petals. Altogether one of the best of the new Roses.

Mrs. Herbert Stevens (S. McGredy and Son, 1910).—Disbudded and grown strongly, selecting only the crown bud, this Rose may claim to reach the exhibition standard. Here again I must part company with the raisers' description. I have grown Mrs. Herbert Stevens now for three years, and the "distinct fawn and peach shading in the centre of the flower" has been conspicuous by its absence. With me, if it has any colour in it that is not white, it must be termed eau de Nil, the ladies' name for a pale green. Anyhow, be the colour what it may, its beautiful shape is beyond question, and there is a refinement about the whole flower that is particularly charming, so much so that if I could grow only one white Rose, I should say give me Mrs. Herbert Stevens. I know there is Molly Sharman Crawford, and even Frau Karl Druschki might be considered by some to have claims; but Frau Karl Druschki "leaves me cold," as the Americans say, and it is only fitting she should. Was not her original name Lady of the Snows? Molly Sharman Crawford has a warm corner in my heart too, for reasons I need not here mention; but though possibly a finer Rose, she is not, I think, so beautiful. Hardy and vigorous, the only possible fault one can find with this Rose is that the flowers are not held quite erect; but here again I am not sure I would have them so. They are better as they are, the beauty of the flower half-hidden, shielded from the gaze of the crowd. No; there is nothing but refinement in this Rose, and I would not wish to alter it.

Southampton. HERBERT E. MOLYNEUX.
(To be continued.)

ROSE PRINCE DE BULGARIE.

Of the many Roses recommended for autumn flowering, it is questionable whether any are capable of producing finer effects than Rose Prince de Bulgarie. The accompanying illustration shows a bed of this Rose as it appeared late in September in a Surrey garden near Weybridge. This variety belongs to the Hybrid Tea section, and is well known to produce better blooms and in greater profusion during late summer and autumn than earlier in the year. In colour the blooms are of silvery salmon, deepening in the centre to a pleasing shade of apricot. It is a delightful and distinguished Rose. From the fact that Roses are grown on a very large scale in Bulgaria for the purpose of manufacturing attar of roses, this country lays claim to the title of "The Rose Garden of Europe," and in this respect the aspiring Balkan kingdom is the envy of greater Powers. It is fitting, however, that so promising a Rose should bear the name of Prince de Bulgarie.



AN AUTUMN BED OF ROSE PRINCE DE BULGARIE IN A SURREY GARDEN.

but it is certainly worth getting, and is being sent out by the raisers at 5s. for ground plants.

White Killarney (Waban Conservator, 1910).—This has been disappointing with me. Its flowers have been too small, and I do not think it is wanted. Certainly not to be mentioned in the same breath with Mrs. Herbert Stevens or Molly Sharman Crawford, to mention two good whites.

TEAS FOR EXHIBITION.

The raisers of new Roses are turning their attention to this class, and in consequence new Teas of merit are more frequent than they were a decade back. We are now obtaining Teas of more robust habit, better constitution, and very much larger flowers. They are gradually becoming more popular, and as they improve in hardiness so will that popularity increase. They are undoubtedly the most perpetual of all Roses, the most prolific in the number of their flowers, and at the same time their perfume and colours are so varied that to anyone with a fairly sheltered garden they should make a very strong appeal. It is true some of the old varieties require very high culture and no little skill to bring the flowers to perfection; but such

is named deserved a good Rose, and I think he has got it; in fact, I am inclined to call it the best yellow Tea in commerce. Its growth is good; the colour does not fade as in the case of most yellows, but deepens in the older flowers; the scent is there, and it is not easy to find a fault with it. The contrast with the foliage is noticeable; it is, so far as I have grown it, mildew-proof, and altogether a first-class variety. I picked a beautiful flower of it on November 10, and it has been good all the season. It was awarded the gold medal of the National Rose Society at the autumn show in 1908, but was only distributed last year.

Miss Alice de Rothschild (Alex. Dickson and Sons, 1910).—This Rose is more of a bedding variety perhaps than the last named, but it has been frequently exhibited this season. It is a fine colour, deeper than A. Hill Gray, and I have yet to see a "white" flower of it. It is a good free grower and deliciously fragrant. I see it generally catalogued as a Hybrid Tea, due, no doubt, to its vigorous growth; but the raisers call it a Tea, and its perfume alone shows that it has much Tea blood in its veins. It is a good, hardy variety for a yellow.

TREES AND SHRUBS.**THE TREATMENT OF INJURED TREE TRUNKS.**

It has occurred to me that it may be of interest to other readers to know how I have treated hundreds of damaged tree trunks and diseased branches.



SHOOT OF THE MACEDONIAN PINE, SHOWING THE CHARACTER OF THE CONES.

At one time I had charge of thousands of street trees, and it used to be a very common occurrence to have one badly barked and bruised. My first duty was to trim the damaged parts of the bark and wood as neatly as possible. I would then paint them over with a mixture of Stockholm tar and sulphur of the consistency of glaziers' putty, to protect the wounds from further injury. I usually placed a piece of 1-inch mesh wire-netting round the trunk, the size according to requirements. I always found this a most effective treatment, and in time the wounds would be quite healed over.

In cases of deep holes or badly-lacerated limbs, I always made a mixture of sawdust, tar and sulphur into a stiff paste, and after the usual trimming I filled up the parts affected to the same circumference as the trunk; then wrapped round the parts treated with coarse canvas, securely tied and netted if near the ground. In this way I have saved very many valuable trees from destruction.

The loss of many street trees is often a mystery, and there are frequently other causes than an accident by collision. My experience taught me a most valuable lesson, viz., that street tree culture requires as much care and observation as any other section of horticulture, and whoever has charge of a dozen miles of trees along each side of tram-lines, and gas mains running parallel to the line of roots, must be an observant man, or he will have failures which are impossible to replace. I could give some most interesting instances of gas-poisoned trees; but my advice to all who have charge of such is to make observations between the tree spaces by thrusting a sharp-pointed steel bar well into the ground. Any gas that is escaping will follow the bar when withdrawn.

Another source of great destructiveness to trees is a fungus attack on the trunk or among the branches, particularly among Sycamores and English Elms. This disease does its deadly work often unseen and unknown until too late to remedy. Once it attacks right round either the trunk or a limb it means death; but if it is discovered before it attacks the circumference and is painted over with Stockholm tar and sulphur, it will be absolutely killed and the tree or branch saved. I have made a special study of this branch of my calling, and I know what this mixture will do. I used to make it a practice of sending a smart youth into the Sycamores and English Elms to examine the junction of the limbs to the trunk, as very often I have found strong attacks at these places. The boy would be provided with a note-book and report to me his findings. In this way very many valuable trees have been saved from a mysterious death.

Sheffield.

V. H. L.

THE MACEDONIAN PINE.

(PINUS PEUKE.)

PINUS PEUKE is regarded as the European representative of the well-known *Pinus excelsa*, or Bhotan Pine, native of the Himalaya. For some time *Pinus Peuke* was looked upon as a variety of *Pinus excelsa*, but in more recent years it has been raised to specific rank. In appearance this stately tree is not unlike the Weymouth Pine.

It is, however, very hardy, and not so readily attacked by diseases, and for this reason we understand that the Macedonian Pine is being extensively planted in Germany in the place of the Weymouth Pine. The natural distribution of *Pinus Peuke* is limited to comparatively small areas in Bulgaria, Macedonia and Montenegro, an interesting point in view of the war now waging in these parts. In certain districts this Pine forms woods of considerable extent, while in Southern Bulgaria it appears here and there as solitary specimens from 25 feet to 50 feet in height, in association with Spruce, and with a thick undergrowth of Juniper. It is a tree varying much in height in its native habitat. In low altitudes it attains a height of 100 feet, while in the alpine zone, with *Pinus montana*, it is dwarfed and stunted in growth. This tree may be raised from seed exported from the Balkans, as is evidenced by the following extract from Vol. V. of "The Trees of Great Britain and Ireland," by Elwes and Henry: "Through the kind offices of Pierce O'Mahony, Esq., we received a large quantity of seed from King Ferdinand of Bulgaria in April, 1908. This has been widely distributed to different friends throughout England, Ireland and Scotland. Most of it was tardy in germination, and the seed came up irregularly, some not germinating until 1909."

There are several fine specimens of this tree in England, and at New there is a group of healthy trees near to the Isleworth Ferry Gate, a portion

of this group being illustrated on this page. These trees, it is interesting to observe, were raised from seed of the original importation in 1864.

ROCK AND WATER GARDEN.**ROCK GARDENS IN THE MAKING.**

(Continued from page 604.)

The Stability of the Rocks.—In the construction of the larger rock garden there is nothing of greater importance than the assured stability of the rocks. Conversely, there is nothing so disastrous as shifting or settling rock. Such settling is most likely to occur after heavy rains, and more particularly in those instances where much rock had been built up on recently-disturbed ground. The danger in such a case is not pleasant to contemplate. It might seriously affect the erection as a whole or in part, and would of necessity upset the planting and cause much work to be done a second time. Hence the need of starting from a solid foundation. To obtain such a foundation, great masses of rock must needs be buried out of sight. In that wonderful rock garden at Friar Park, hundreds of tons of massive rocks are so buried, and these, having their start on a natural rock-bed foundation, are as safe as the hills themselves. In gardens generally, a comparatively safe and solid foundation may be obtained



THE MACEDONIAN PINE, PINUS PEUKE. THIS IS A TREE FREQUENTLY MET WITH WILD IN THE BALKANS.

on gravel or clay at no great expense. In other instances adequate safety may be assured by sinking the foundation-stones deeply into firm, undisturbed soil. The gravest error of all in this connection is that of arranging rocks on recently thrown-up banks of earth. Where this is so, the rocks should be first arranged and the soil and grit supplied afterwards. In such a case the tight packing of every crevice from behind is a matter of considerable importance. For this purpose soil, brick rubble and small pieces of rock are invaluable. By wedging such a mixture into position, the roots of plants will find ample support later on.

The Naturally-Endowed Site with undulated bank or rugged, picturesque slope is in a different relation altogether, for the soil is already in position, and is stability itself. Here the operator would have to concern himself more with fashioning and so piecing together that a useful and presentable whole is assured. In such circumstances, the chief work, apart from the rock-building, would be the removal of some portion of the crude, inert soil of the bank, replacing it by more suitable material. This should be done with every stone and crevice as the work proceeds, though more particularly with those crevices whose position renders them immediately available to the planter. For such work one cannot too strongly urge the mixture mentioned above. Old mortar, broken sandstone or limestone, in pieces from the size of the fist to one-half or one-quarter that size, will be found of special value. In Nature such things play an important part by reason of their uniform coolness, and in our gardens they may be made to perform a similar function, though perhaps in minor degree. Moreover, these things nourish and sustain plant-life, hence the need for their presence in every crack and cranny the rock affords. A vacuum, whether horizontal or vertical, would, of course, be fatal to vegetation, and the fact should be writ large. In dealing with this question of rock and *débris* charged crevice, we might give more than a passing thought to

The Soil Nature Provides for her children, and how not a little of this is continually washed into position either by rain or snow, sometimes into the crevice itself, though more frequently into the very heart or tuft of the plant. Hence an alpine plant in Nature is in receipt of an annual mulch, so to say, and that by a natural process. It may be, too, that the mulch is repeated several times each year, of which the occasionally buried or half-buried examples of plants afford ample proof. Those that remain exposed are, of course, the best, not merely from the standpoint of perpetuating the species, but as object-lessons for those who have eyes to see. It is into this eternal supply of grit mingled with humus, rich as it must be in the soluble inorganic salts which are constantly being brought down from the higher slopes, that the most diminutive of alpine plants delight to root afresh, and of whose value we who garden

among such things have even as yet but the faintest idea. To a high alpine in Nature this constantly-recurring mulch is its chief food supply. For proof of it one has but to remove a tuft from a rocky ledge and view the mat of root-fibres it contains. In part this may be due to position and environment, though not entirely. The very depressed spreading nature of the tuft will show the marvellous spread of the root system in many plants, will show the ramifications of every tiny rootlet eager in the desire to embrace the moisture that is not infrequently—though all imperceptibly—associated with the rock. The same plants, too, will show us how much the rock is to them in those higher regions of the earth where, but for the rains, the mists and the snows—each and all rich in inorganic salts—these children of the mountains in these rarefied atmospheric conditions could not long survive. Thus we see how Nature provides for her own.



SILENE ACAULIS GROWING WILD ON THE ALPS.

In Lowland Gardens, and generally under cultivation, the plants are differently conditioned. We provide them with soil already rich—too rich, often enough—in vegetable matter or humus, and we see the results of our handiwork in a type of plant that, not infrequently savouring of undue vigorousness, loses not a little of that infinite beauty—dainty grace, more brilliant colouring or diminutive cushioned tuft—that so characterised it in its mountain home-life. In a word, we out-characterise certain of the flower gems of the mountain world by a generosity of treatment that probably does not make for longevity or even give to our rock gardens those brilliant colour touches that we still retain in the mind's eye. Elsewhere, in a former chapter, I touched upon the danger of soil, of soil

damp and soil richness to many high alpine having woolly tufts of leaves; and here, in a closing word upon soils, I would like to drive the point well home, to emphasise the need of more grit and less rich soil than is usually employed; more rock in a finely-pulverised form capable of being introduced into the most diminutive of leaf-tufts, there to assist in the formation and reconstruction of root-fibres, and in turn to refresh, revitalise and preserve to these plants the best with which Nature endowed them.

E. H. JENKINS.

(To be continued.)

ALPINES IN THEIR NATIVE HAUNTS.

Saxifraga muscoides.—When plant-hunting recently, at the head of the Turtmann Valley in the Valais and at an altitude of 7,000 feet, I came upon a fine mass of *Saxifraga muscoides* growing in the interstices between large pieces of rock, which had come hurtling down the alpside and had locked together in a confused pile. Here, in the accumulation of vegetable detritus, the *Saxifraga* made large "mats" of foliage, and, rising above this green moss-like carpet, the white flowers were produced in such abundance as to almost entirely obliterate the foliage.

The Cobweb Houseleek.—On the open alpside, subject to the intense rays of the July sunshine, this *Saxifraga* thrives amazingly, while on the same rocks the Cobweb Houseleek grew in downy clusters. The rosettes varied in size from the normal half inch in diameter to tiny Pea-like growths one-eighth of an inch across, and all more or less crimson in colour, owing to the fierce exposure. The *Sempervivum* appeared to grow on the bare face of rock, where the merest roughening of the surface induced a slight deposit of wind-swept detritus to accumulate.

It struck me as curious that these two plants, which we associate in our gardens as shade-loving in one case and sun-loving in the other, should be so happy in each other's company. Probably the explanation is to be found in the fact that, despite the torrid heat of the upland pastures, the soil and the partially-protruding rock masses are being perpetually moistened with the soaking snow-water which percolates so copiously down the mountain-sides throughout the growing season, while the uninterrupted grip of winter ensures that they shall be dry and not exposed to the variations of temperature which they have to withstand in our muggy climate. Many such plants, which are generally spoken of as shade or partially shade loving in our garden, but which inhabit fully-exposed positions in the mountains, would, I believe, flower much more profusely with us if planted in a sunny aspect, provided we give them a copious water supply from March to July.

Silene acaulis.—Having zig-zagged up the steep alpside to an altitude of 8,000 feet, passing multitudes of alpine gems, lavished in the utmost profusion on every hand (but which space will not

permit me here to refer to), I came upon many glorious patches of *Silene acaulis*, the beautiful, compact Cushion Pink, which at these high elevations mantles the steeper sides of almost every protruding hummock. In such positions it is so "close" and "hard" as to resemble masses of green coral, while, when the flowers open, they are so closely set as to entirely obliterate the foliage. It is interesting to trace back some of these communal growths, which, even when covering a large space, all emanate from one strong, woody taproot, which plunges down and down into the stony soil and defies extraction. The clustered growths, however, can with advantage be split up, and if two or three individual spikelets are planted deeply and firmly into a very sandy compost, kept moist and "close" for a few weeks, they make satisfactory cuttings. After the rather poor display this *Silene* gives us in the rock garden, it comes as a great delight to tramp over alpsides rendered rosy with the innumerable tufts of this pretty plant. I have found that the moraine offers the greatest chance of success with it near to London, and the variety *pedunculata* thrives very well with me, as the illustration in THE GARDEN of June 17, 1911, shows, though, of course, it falls far short of the glories of the high upland pastures.

REGINALD A. MALBY.

FLOWER GARDEN.

SOME FACTS ABOUT THE TULIP MANIA.

(1634—1637.)

THE apocryphal tales of this famous period are fairly widely known. So, too, are the sort of bargains that were sometimes made by those desirous of possessing some expensive variety when the necessary cash was short or wanting. These are the commonplaces of Tulip history or romance, and if they are not true in fact, they are in spirit, inasmuch as they illustrate in a very striking way the unreasonable and unparalleled values to which Tulips rose in the height of the mania. What actually happened was so extraordinary that it really needed no bush to excite the wonder of succeeding generations. The craze has been aptly compared to the Mississippi Scheme of Law in France and the South Sea Bubble in England, and not without good reason. They were all to be short cuts to untold riches, but in Holland, as elsewhere,

Humpty Dumpty sat on a wall,
Humpty Dumpty had a great fall,

and it took all the king's horses and all the king's men to put things anything like right again.

It must be remembered that the Tulip cannot have been a very common flower in Western and Central Europe in the early years of the seventeenth century. The first Tulip flowered in Holland in 1571, and in France in 1611. I mention these dates because it has been suggested, with great probability, that the fashion in Paris of ladies of the upper classes wearing costly flowers in their dresses and the rivalry of the young beaux to present the most expensive kinds was one of the

great contributory causes of the mania. For even then Holland specialised in bulbs, and the rarest and most beautiful Tulips in Western Europe were to be found there. Paris must have them at any cost. The fashion, too, was a long-lived one, and hence there was a long-continued demand.

This, coupled with the wish of the rich Dutch connoisseurs to obtain the best varieties for their own collections, gradually raised prices and kept them at a higher and higher level, until at length the idea got hold of everyone that growing and selling Tulips was a sure and easy road to riches. It is impossible to say how long the mania-time *par excellence* was in gathering. The year 1634 saw it firmly established, and from this time onward until just before the crash came in April, 1637, the chronicler has but to record one development after another, as the fever to get quickly rich spread

van der Eyck. We know this, because in Mr. E. H. Krelage's unique library of mania pictures and literature at Haarlem there are paintings of the most famous of these flowers, and one and all are broken or striped.

Now it by no means follows that two bulbs of the self-same variety will break alike—one may give good and the other poor variegations—nor does it follow that what was good this year will be ditto the next. Thus breeders, or plain, unbroken Tulips, were in much demand, and it was also an easy matter to sell inferior bulbs to what they were represented, owing to the difficulty of detection.

The other point to which I would draw attention as of particular interest is the wonderful bargains that were from time to time made for the acquisition of valuable bulbs. Of these we have documentary evidence, and they are unlike the herring and the



SAXIFRAGA MUSCOIDES AND THE COBWEB HOUSELEEK IN THEIR NATIVE HAUNTS.

among every class. Thanks to two Dutch works—the "t Samenspraecken tusschen Waermond and Gaergoedt" (or Conversations between Waermond and Gaergoedt) and the "Beschrijven der Kruyden" of Abr. Munting—backed up by recent researches by Sautyn-Kluyt and Solms-Laubach, we can get a good general idea of how the sales were conducted and the gradual evolution of necessary "conditions" to suit the altering circumstances of the time.

Before I try to describe these in some detail, I would like to make one or two general observations in order to elucidate what will be said hereafter. First, everyone may not know that garden Tulips begin life with a coat of only one colour, and that it is only after a certain lapse of time they become striped or, as it is technically called, "broken" or "rectified." It was only in this altered state that Tulips brought such very high prices as £280 for an Admiral

onion, the inquisitive botanist visitor, or the jealous connoisseur tales, inasmuch as they are true. I conclude this part of my article with a list of what was once given for a bulb of Viceroy, a celebrated byblœmen variety :

| | <i>Value in Florins.</i> |
|---|--------------------------|
| Two loads of wheat | 448 |
| Four loads of rye | 558 |
| Four fat oxen | 480 |
| Eight fat pigs | 240 |
| Twelve fat sheep | 120 |
| Two hogsheads of wine | 70 |
| Four barrels of eight-florin beer | 32 |
| Two barrels of butter | 192 |
| One thousand pounds of cheese | 120 |
| A complete bed | 100 |
| A suit of clothes | 80 |
| A silver beaker | 60 |
| Total | 2,500 |

Taking the florin at 1s. 6d., this gives the price of this one bulb as somewhere about £210.

JOSEPH JACOB.

(To be continued.)

COLOURED PLATE.

PLATE 1460.

NEW BORDER CARNATION W. A. WATTS.

THIS new Carnation is of the border type, the true garden Carnation, a plant that will grow well in any ordinary soil with simple care and attention. It has an excellent habit, with firm, erect flower-stems, non-bursting calyx and large, beautifully-formed blooms of just that delightful shade of deep rose pink called Rose Nilsson in the "Répertoire de Couleurs," page 120, a colour that pleases everyone, and can be used with telling effect in bouquets and in table decoration, besides being so charming in the border. Another attribute of this novelty is its fragrance, too often wanting in the modern Carnation. Mr. Watts, the raiser of this variety, has for many years



A BEAUTIFUL HYBRID ORCHID: BRASSO-CATTLEYA QUEEN ALEXANDRA DELL VARIETY.

worked among the Carnations, and has secured four certificates for new varieties. He has always protested against "dressing" the blooms for show, and has in the strongest terms condemned this practice and the paper collars, which, we are glad to say, are now much less in evidence than they used to be.

A USEFUL HARDY BAMBOO.

BAMBUSA PALMATA is one of the most ornamental of the Bamboos, and also one of the hardiest. It is remarkably beautiful with its broad, shining leaves, and, as it soon forms a large plant, it is one of the best where a handsome group is wanted for planting in the garden or in open spaces in the woods. *B. palmata* spreads rapidly in some moist places, where it grows taller than in dry soil. In the latter it does not always look happy, but a position prepared for it by deep digging and the addition of some good old manure will soon show how this Bamboo appreciates such treatment.

S. A.

THE GREENHOUSE.**NOTES ON CHRYSANTHEMUMS.**

THE BEST NEW VARIETIES TO GROW.

EVERY year new varieties are introduced. Some are of very high merit, others not so good. It is well, however, that all be grown by those cultivators who have time and space for the purpose. Amateur cultivators who have not the necessary space for the plants should only grow varieties that have been proved by experts to be the best. Furthermore, they should not discard older, tried sorts for those that are not proved to be, as yet, superior. It is good policy to rely chiefly on the established varieties, and to add approved new ones to them as occasion and necessity may arise. The following are really splendid new sorts, introduced during the

Fred Green.—A rich purple-coloured variety, with splendid leaves, dwarf habit. The plants should be propagated early, and stopped early in April in order to secure first-crown buds.

William Turner.—This is a grand white Japanese incurved variety which all amateurs should possess. The plants are easy to grow, and bear huge, well-formed blooms. Late first or second crowns are the best.

Mrs. Gilbert Drabble.—A marble white variety. The cuttings must be rooted early so as to obtain an early natural break and first-crown buds early in August. So treated, every bud will develop into a fine flower. It is a superior variety to Mrs. A. T. Miller, the petals incurving similarly, but being of better substance.

Lady Francis Ryder.—This is a pure white variety; the habit of the plant is good, the blooms are large, the petals reflexing and falling gracefully like a shower.

H. E. Converse.—Reddish bronze, with gold reverse, a very fine Japanese incurved variety. Propagate early, and take first-crown buds early in August. It is a very full-petalled variety, and develops into a deep bloom.

Harry Wood.—Crimson, shaded scarlet, long, reflexing petals.

INCURVED VARIETIES.

Doris.—A pure white, perfectly incurving.

Durbar.—A rich plum colour, with lighter reverse, finely incurving.

Heston Gladstone.—A white sport from the variety Lady Isabel. One of great merit.

Ethel Thorpe.—Silvery pink, high centre, a splendidly-formed flower.

Maritana.—Pure yellow, very large.

Master C. Hall.—Amaranth in colour, a large, refined flower.

SINGLE-FLOWERED VARIETIES.

Emily Smith.—A bronzy yellow, lovely in sprays, flowers late in the year.

Josephine.—Golden yellow, fine when disbudded.

Marjorie Lloyd.—A deep apricot, a large flower on stiff stems.

Margaret Gray.—A light bronze in colour, a beautifully-formed flower.

Mrs. Garner.—This is an improved Bronze Pagram, with gold tips and base; fine for exhibition.

Phyllis Bryant.—Sulphur yellow, a large, perfect flower. Avon.

A NEW BRASSO-CATTLEYA.

The most attractive feature of the Orchid flowers illustrated on this page is seen in the large expansive lip, which is deeply and most delicately fringed. The lip is certainly most beautiful in *Brassavola digbyana* and its many hybrids, and the variety illustrated was raised by crossing this species with *Cattleya Mossiæ* Wagneri. This hybrid, known as *Brasso-Cattleya Queen Alexandra The Dell* variety, is of clear ivory white colour, except for a shade of pale green in the throat of its exquisite lip. It was shown a few weeks ago by Baron Bruno Schröder, when it received the high award of a first-class certificate from the Royal Horticultural Society. It is a bold, massive flower, and one of the most handsome yet raised.

past two or three years, cuttings of which may be purchased at a very reasonable price:

His Majesty.—A rich crimson, with long, wide petals, which reflex evenly. It is an improved Master David.

King George.—Mulberry red in colour, long florets, a large bloom.

G. J. Bier.—Pure white, similar in form to the variety Hon. Mrs. Lopes.

Japan.—A deep orange yellow, broad, drooping petals.

Miss A. E. Roope.—Rich golden yellow, long petals, incurving at the tips.

Bob Pulling.—A very deep yellow, a large bloom with reflexing petals. This is a sport from Hon. Mrs. Lopes.

Francis Rowe.—Bronzy red on a yellow ground, with reflexing petals.

A. M. Thorpe.—Creamy white, a very deep bloom.



NEW BORDER CARNATION :
"W. A. Watts."

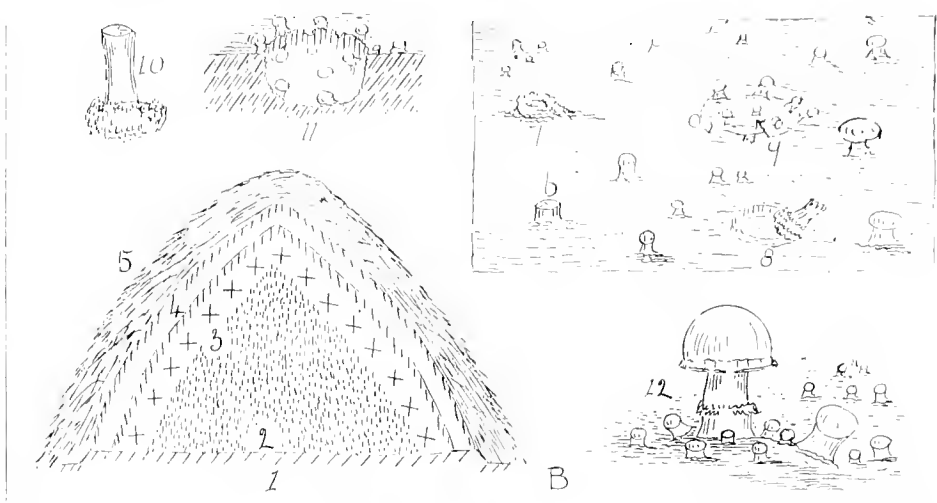
GARDENING FOR BEGINNERS.

HOW TO GROW MUSHROOMS.

MANY people would like to grow Mushrooms in their gardens. Many make the attempt—some succeed, others fail—but a great many do not make a trial because they think it is quite necessary to have specially-constructed houses in which to grow them. This is a mistaken idea. If there are cellars or sheds on the premises, Mushrooms can be grown in them when the necessary heating material is procured. Mushrooms may be grown in pure leaves, or in ordinary hot-beds in the open air; but as rather more skill is necessary than in growing them in sheds, I will confine these notes to the latter.

The Needful Essentials.—Materials that will combine to make a hot-bed which will be sweet and produce a medium lasting heat. Moisture of atmosphere as well as heat, consistent moisture of the bed without excessive watering of the latter being necessary. A darkened interior of structure, exclusion of all cold draughts, and fine regulation of all ventilation.

The Material for the Beds.—This is best when procured fresh from the stables; and newly-gathered tree leaves from heaps where fermentation has not set in. The horse-manure, and the short, strawy litter with it, must be gathered fresh every morning and spread out thinly in an open shed to partially dry, and be turned over every morning to allow the rank gases to escape. When sufficient has been gathered to form a bed, we will say one measuring 8 feet long, 4 feet wide and 14 inches deep, the whole must be thrown up into a heap and left so for one day and a night. A strong heat will be induced, but, before the material burns, the heap must be spread out again, when much rank steam will escape, and the manure will be thus sweetened and made ready for use in the building of the Mushroom-bed. This manipulation



2.—A RIDGE-SHAPED BED AND MUSHROOMS IN VARIOUS STAGES OF DEVELOPMENT.

of the manure is absolutely necessary if Mushrooms are to be grown successfully. When neglected, the spawn perishes and all labour is in vain.

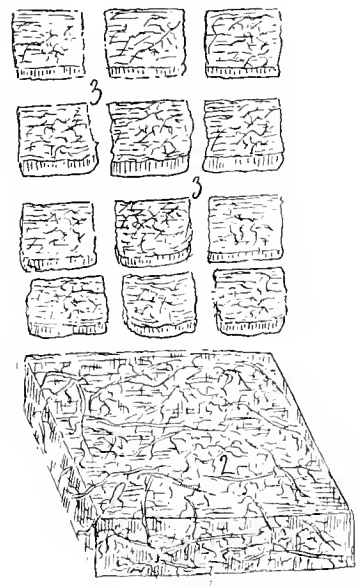
Building the Bed.—On the space selected shake out a thin layer of the manure and some leaves—one-third of leaves to two-thirds of manure—and tread all down firmly. Build up the bed in layers in this way, firming each layer as put down. The firmer the bed, the longer will the heat in it last and the more even will it be. Insert a thermometer; the heat may rise to more than 100°. If so, wait until it drops to 85°; then insert the spawn.

The Illustrations.—Fig. A shows at No. 1 a brick of Mushroom spawn; at No. 2, the white

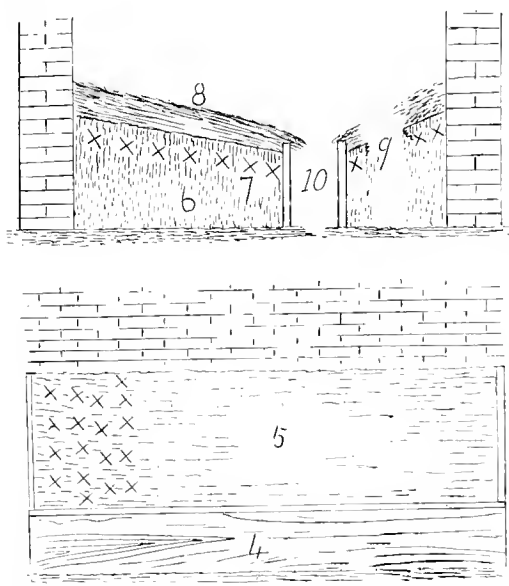
mycelium threads in it. The moist heat induces these threads to spread, and then Mushrooms grow from them. Nos. 3, 3 show the brick broken up into twelve pieces, which must be inserted 2 inches below the surface of the manure. No. 4, the retaining board of the bed, No. 5. The crosses denote the positions of the pieces of spawn put in 9 inches apart each way. Then cover the bed with new sifted loam 2 inches thick, make it firm, and finally cover all with a clean thatch of straw or hay from which the seeds have been beaten. No. 6 shows a section of the bed; No. 7, lumps of spawn; No. 8, soil and covering of straw. Where a shed is wide enough, beds on both sides may be made, as depicted at No. 9, with path (No. 10) between. A ridge-shaped bed is shown at No. 1 in Fig. B. No. 2, the bed; No. 3, spawn; No. 4, layer of manure and sifted soil on the lumps of spawn; No. 5, covering of straw.

How to Gather Mushrooms.—Do not cut them off as shown at No. 6, else the stumps will decay as shown at No. 7 and kill the mycelium near. Carefully pull up the Mushrooms as depicted at No. 8. The white threads are thus broken, and in and around the hole made as shown at No. 9 young Mushrooms will again grow. When gathered, cut off the stem and discard the stump, No. 10. No. 11 illustrates the young Mushrooms growing in the holes made by pulling. No. 12 shows a specimen that has grown to perfection, and must be used before it opens out any more. When carefully pulled, the tiny ones near will not be harmed, and will soon attain to a usable size. A good bed should begin to bear in six weeks from the time of spawning, and continue in bearing at least nine weeks.

Insect Pests.—Woodlice, without doubt, are the most troublesome pests to deal with. They must be trapped by placing sliced Potatoes about their haunts, or old pieces of wood under which they shelter. Slugs are likewise troublesome, and may be kept at bay by means of soot and lime or trapped on Lettuce leaves. G. G.



1.—SHOWING THE METHOD OF SPAWNING A MUSHROOM BED.



GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Hardy Ferns.—The growth on many having become unsightly, it will be advisable to cut it away and take advantage during open weather of cleaning the ground and top-dressing with well-decayed manure and leaf-mould. Any replanting where Ferns have become too crowded may now be carried out, well mulching any that are none too hardy after doing so. There are many places where the common Bracken might be introduced with good effect, not in the flower garden, of course, but on the outskirts, where the Ivies, St. John's Wort and Periwinkles are used to cover banks and old tree stumps.

Epimediums.—These delightful spring-flowering herbaceous plants delight in shady places. Here we have a collection planted with a few of the lesser-growing hardy Ferns, and the flowers brighten up the bed before too much growth is made. For the rock garden as well they should be planted, and when established are most effective.

The Rock Garden.

Alterations.—The weather has been of great assistance in carrying out the work of remodelling and replanting, and the planting of all the large material and shrubs will enable these to become well established by the spring.

Rock Plants in Frames.—Providing the plants in the pots are well plunged in ashes or sand or other suitable material, they will suffer but little harm from the weather. They should at all times be protected from heavy rains, but receive abundance of air except during severe frost, when the lights are best covered.

Hardy Primulas.—Owing to the mddness of the weather, several of these are beginning to throw up their spikes of bloom. The present is a suitable time to give the plants a good mulching of rotted manure—that is, when there is no frost in the ground.

The Rose Garden.

Planting.—It is advisable to get necessary planting completed without delay, and this relates to all sections. Where space permits and a Rose garden proper of formal beds is planted, the use of one variety to a bed has much to recommend it, and suitable varieties of free and continuous blooming kinds should be employed.

Climbing Roses.—The supports, whatever they may be, should at this season of the year be examined, and any that show signs of deterioration should be renovated. Wooden pergolas are very effective, but unless firmly constructed soon become dilapidated. The chief supports ought to be firmly embedded in the ground, and if the ends are charred, so much the better. An effective arrangement is obtained by placing three poles triangularly, and sloping to each other at the top. These ought not to be trimmed too hard, but have the side branches left several inches long. Here we employ them similarly in the shrubberies, and with splendid effect. Several of the conifers, such as *Thuyas* and *Thujopsis dolabrata*, when too large for removal, may be trimmed up and, the ground at the base having been prepared, make excellent supports.

Plants Under Glass.

Freesia refracta alba.—The growths of the various batches of these should receive attention in the way of support, and the easiest means of accomplishing this is to place three or four neat sticks round the edge of the pot and loop them up with a strand of twisted raffia or green tape. Keep the plants in a light position in a warm greenhouse, and now that growth is free, give sufficient water and occasional doses of liquid manure.

Coleus thyrsoideus.—As a winter-blooming plant there are few blue flowers to excel this, and for decorative purposes it is superb, as nice plants may be had in quite small pots, providing the plants are well fed at the roots. Over a ground-work of Maidenhair Ferns their arrangement is most effective.

Streptocarpus.—For blooming in the winter months, seedling plants in small pots are invaluable; it is one of the most useful subjects for indoor decoration. For this purpose the seed should be sown as soon as ripe, when it quickly germinates, and if

the seedlings are potted off and grown on in a warm structure, they soon develop into nice little material.

Fruits Under Glass.

Strawberries.—Unless exceptionally early supplies of fruits are required, the New Year will be quite soon enough to introduce plants in pots for forcing; then looking out the most promising crowns and putting them on a shelf in a light, airy structure for a time before placing them in a warm house.

Successional Houses.—As the Grapes are cut from these, the work of painting and generally cleansing should be proceeded with, so that the majority of the Vines at least are finished and ready for forcing again by the end of the year.

Bottling Grapes.—Place these in a cool, dark place, such as the fruit-rooms, where an even temperature is maintained, and cut sufficient of the wood so that the stalk is able to reach the water. Either end, however, will absorb the moisture to keep the bunch fresh. The bunches must every now and again be examined, and any bad berries cut out with the Grape scissors.

The Hardy Fruit Garden.

Bush Fruits.—Black Currants ought to be carefully watched for the mite or big-bud, which is readily detected, and if the bushes are old, grub them up and burn them. At the same time give the ground a dressing of lime, and then trench or dig and plant elsewhere. Purchase from a reliable source, selecting a good variety, such as Boskoop Giant. Black Currants, unlike White or Red, require but little pruning except thinning out the growths when these become crowded and generally keeping the bush shapely and in bounds.

Gooseberries.—The pruning of these is best delayed till as late as possible, or perhaps the birds will take the few remaining buds that are left on the spurs unless rendered distasteful; but this has to be done repeatedly, and by the former mode of leaving it, a crop, unless ruined by frost, is generally assured. The best varieties are so delicious as dessert fruits that oftentimes they are grown on trellises and walls, where they may be securely netted. A fence, either of wooden posts or iron, is cheaply constructed, and cordons planted in an oblique manner will produce fine fruits suitable for dessert or exhibition. Single, double or treble cordons, if grown against north walls, will be found exceptionally valuable, and take up but little space.

F. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Walks.—There has been a more than usual number of weeds (annual grass) on all the walks, and the only satisfactory way of cleaning at this time is to pick them by hand. It seems a big undertaking, but really it is not so. Wet portions where moss is growing are best freshened by turning the upper layer of gravel upside down.

Lawns.—A very slight application of sifted material from the compost heap spread regularly over the surfaces of lawns exerts a wonderful influence for good. Some lawns do not require it, but there are others, imperfectly prepared at first, to which such a dressing is all-important, but, judging from their appearance, always denied.

Worms.—Only once have I been troubled with the evil of a lawn morning after morning being rendered unsightly by worm-casts. The whole of the lawn was then watered with liquid impregnated with quicklime, to the final destruction of the worms. There are vermicides to be had for sprinkling over the surfaces and watering in, and certainly in bad cases either these or quicklime should be tried. Mild weather and before severe frost sets in are the best times to apply them.

Lily of the Valley.—Either now or early in spring the beds, after being thoroughly cleaned, should have about half an inch of material rich in fertilising matter applied smoothly all over the surface. New plantations may be made at this time, and it is worth remembering that this plant soon overruns even the space of 4 inches to 12 inches that may be allotted to small clumps. It is very soil-exhausting, so that as soon as the

spikes and the foliage begin to diminish in size after proper surface applications, a new plantation should be formed forthwith.

The Plant-Houses.

Palms.—There is no better time of year than the present for cleaning. The washing of large plants thoroughly requires more labour than it is possible in the majority of establishments to afford, but a solution of soft soap, petroleum and hot water at 180° both cleanses the plants and destroys insects, though one or even two washings must not be considered enough.

Cyaniding.—No more effective insecticide than the fumes of hydrocyanic acid is available, and where the gardener himself can, or is anxious to, operate so that he is sure no one can possibly come to harm by using it, I would recommend its employment in serious insect infestments. By allowing a lengthened period of the vapour in the house, a small quantity of cyanide of potassium is found to be as fatal to insect-life as a larger amount for a short period, without the risk of damage to vegetation.

Carnations.—The next six weeks are the most trying of any period to winter-flowering varieties. In the North at least it is no use trying to force the plants as some do. A little heat in the pipes to produce a buoyant atmosphere is essential, but as much fresh air as circumstances will permit should be allowed.

Young Plants.—All that can be expected of these is that they will extend their rooting system, and it may be noted that more roots are formed by keeping the soil only moderately moist than at any time wet, and their tops are strengthened. Usually no stopping need be done till January, when the lower buds will be well formed. Whether to shift on the more advanced plants from 2½-inch pots is one of those questions that must be decided on the merits of the case; but rather than risk a check by repotting it might be well to consider if a little manurial aid would not be sufficient to carry them on till the turn of the year. Malmansons should be kept in a perfectly quiescent condition. They are building up a strong system, though apparently inactive.

The Kitchen Garden.

Tomatoes.—A small sowing may be made now, to be followed by another a fortnight hence for producing plants to succeed those now well forward in pots. The seeds should be barely covered, and the covering of the lightest material. In a very high, moist temperature germination soon takes place, and without a high temperature at this period there is little use in trying to raise the plants.

Late Plants.—To ripen fruits properly, not less than 55° to 60° of heat should now be given. As a rule, when planted out, no water either at the root or in the house should be applied. It is a very curious problem why, but for years I have found that fruit can be produced for a very long period in the winter season under these conditions, and the more heat the plants receive, the better flavoured and coloured is the fruit.

The Hardy Fruit Garden.

Young Trees.—The early treatment of young fruit trees is not so well understood in these days as it was in the past. One thing is certain, that whether the tree is a bush or a trained wall tree, hard pruning is essential to obtain a "foundation." So essential is it that I never hesitate to cut back a badly-grown young tree so as to form a new start for it. With a good root system it soon makes up for the check.

With a Difference.—Apricots and Peaches, however, have a knack, if at all decently furnished, of overcoming the deficiencies in this respect of early years; therefore it is not necessary to take such drastic measures with these. Another thing of great importance to all kinds of young wall trees is to allow plenty of space for the shoots from the very beginning. It may seem advancing rapidly to have a shoot at every 2 inches or so, but that is a delusion and an assured method of weakening the tree which nothing else but thinning will stop.

Spraying.—I do not think the present is the best time to spray, but in the case of old trees covered with moss, a good drenching with a caustic solution should be given at any time, so that the parasite may be quite killed and cleared off before spring.

R. P. BROMBERGTON,

Tynninghame, Prestonkirk, N.B.

NURSERY NOTES.

MESSRS. DANIELS BROTHERS, LIMITED, NORWICH.

FOR a great many years the name of Messrs. Daniels Brothers of Norwich has been a well-known and highly-respected one in horticultural circles. As purveyors of high-class garden and farm seeds they are renowned the world over, and many good specialties, such as Daniels' Defiance Cabbage and Duke of York Potato, have emanated from their establishment. Although so well known in connection with vegetable and flower seeds, we do not think it is generally realised what an enormous nursery business they have; nor, indeed, were we aware of the extent of this side of their enterprise until we visited their nurseries at Norwich in the early autumn of this year.

These nurseries cover an area of about sixty acres, a greater part of which is devoted to fruit trees and Roses. The demand for these during recent years has been so large that Messrs. Daniels have had to take for nursery purposes land that was at one time devoted to root crops, and the effect of this new soil on the young trees has been truly remarkable. We have never seen a better stock of young Apple and Pear trees. All were the picture of health and cleanliness, and as they are growing on comparatively light soil, they should transplant well and give a good account of themselves in their permanent situations. A local Apple named Vicar of Beighton has a good reputation in the Eastern Counties, and is one that Messrs. Daniels first sent out. It is a rather large, solid Apple of dark red colour, and will keep well into June of the following year, when it is excellent as a dessert fruit. The Roses, too, were in splendid condition, all the best varieties being grown in abundance in both standard and bush form, as well as a large quantity of all the best rambler sorts in pots.

Strawberry plants are also a speciality of the firm, and at the time of our visit there were something like one hundred thousand sturdy runners ready for sale. Black Currant Boskoop Giant and the Red Fay's Prolific occupied a large quarter in one part of the nursery, and the nursery manager pointed out with pride the sturdiness and cleanliness of the whole lot.

In the hardy tree and shrub department we were particularly interested in some large quarters of the true cricket bat Willow, for which there is such a demand just now. To ensure propagating the right variety, Messrs. Daniels, several years ago, consulted the authorities at Kew, and secured the true variety of *Salix alba cærulea* grown from cuttings taken by Mr. Shaw, the eminent cricket bat maker, from a tree which he selected as being the best variety for making high-class cricket bats. The greatest care has since been exercised to keep the stock perfectly true. We also noticed a large number of young Clematises, all of which are propagated and raised at the nurseries. They were a particularly healthy lot that ought to do well in almost any situation when planted out.

In the hardy plant department Michaelmas Daisies in all the best and newest varieties, including the beautiful Climax, the double blue-flowered Beauty of Colwall and a charming large white-flowered variety named Snowdon, were growing in great profusion, as well as Rudbeckias, perennial Sunflowers, the beautiful *Scabiosa caucasica*, Heleniums, Kniphofias and a fine lot of Dahlias,

among these being a delightful bright rose pink decorative variety named Delice.

Passing reference has already been made to the enormous seed business that is done by the firm in their extensive premises in the Royal Arcade, situated in the heart of the city. Here seeds are sent to all parts of the world, the firm having a very large export trade. At the time of our visit bulbs of all kinds were being despatched, and it was interesting to note that all were of exceptionally good quality. We were privileged to see the first catalogue issued by the firm in 1871, this being a small booklet of comparatively few pages. Now two distinct catalogues, both running into hundreds of pages and both being of great artistic merit, are published, indicating in a concrete manner the enormous strides that horticulture and, incidentally, Messrs. Daniels' business have made since that time.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

"TINGITANA LILIES" (The Hon. Mrs. W.).—If by "Tingitana Lilies" reference is made to the Tanzier Iris (*I. tingitana*), a light protection of Larch branches, or these with Braeken Fern, would be desirable. We take it that only the growth is now showing, not the flowering spikes. The former is always made in autumn, and in our own case is about six inches high at the time of writing. In the case of freshly-imported bulbs from Italy, an earlier growth would be made, the danger being the breaking down of the shoots by snow later on. We presume the bulbs are fairly deep in the soil, 5 inches at least; if not, a mulching of Cocoa-nut fibre, 3 inches deep, should be given on the surface.

SWEET PEAS (M. C. L.).—As you only require the Peas for ordinary decorative work, it is quite possible that the border will serve your purpose for the third time. We cannot advise you, however, to give up the farmyard manure entirely. For the moment, however, you need not employ any. Instead of manure, give a dressing of lime, tipping a bush in a heap to each rod of ground, covering it lightly with soil to slake, and distributing it over the surface when finely broken down. Then you might deeply trench the whole, roughly ridging it after the manner of earthing up Celery. This will both aerate and drain the soil, while exposing it to the beneficial influences of frost. In February re-trench the soil, and manure it at the same time with well-decayed stable manure. Failing this, use Wakeley's Hop Manure, which is a good substitute, and again a short time before planting. The addition of sand or grit would be very helpful.

DELPHINIUMS AND OTHER PLANTS (E. L. M.).—We have never heard of a 6-feet-high red or crimson flowered Delphinium, and the raiser of such a plant would be considered fairly lucky. Of tall-growing sorts of other colours there are not a few, though not infrequently some of the tallest of all are weed-growing seedlings. The following are among the best: Barlowii vesicolor (rich violet), Diamdeur (rich cornflower blue, 6 feet), Dragonfly (violet, 7 feet), Félicité (6 feet to 7 feet, sky blue), King of Delphiniums (semi-double, gentian blue, 6 feet), Lizzie (Cambridge blue), Mme. V. Geslin (5 feet to 6 feet), Mammoth (sky blue and very tall), Princess May (sky blue and mauve, 7 feet to 8 feet) and St. Paul (rich azure blue, 7 feet). It should be stated that these heights represent the plants when established and well cultivated in good soil. The best tall perennials of the height named having reddish or crimson flowers are *Helenium autumnale* and *Kniphofia Uvaria nobilis*, *K. U. glaucescens* and *K. U. grandiflora*. *Lobelia cardinalis* Firefly and *L. c. Queen Victoria* are both superb in colour and admirable for grouping.

LOBELIA (W. T.).—The treatment recommended by our correspondent Mr. E. H. Jenkins is applicable to all forms of bedding Lobelia, and is much to be preferred to lifting and potting the old clumps, so many of which perish as a result of this check, and by reason of an exhausted vitality after a long period of flowering. The system is also equally applicable to such well-known bedding plants as *Alternanthera*, *Ageratum*, *Verbena* and other soft-wooded plants, which do not lift and transplant well when old. Apart from its value in this direction, the system is also a good economiser of space, a not unimportant matter for the amateur during the winter season.

TREATMENT OF PASSION FLOWER (W. S.).—Now that your Passion Flower has ceased to blossom, remove the ends of the branches to reduce the weight and keep it from being torn by wind in winter. In February, nail any shoots into position which may be required for extending the area covered by the plant; then cut the remaining side shoots back to within three eyes of the point where they join the main branches. Should any insect pests be noticed on the wood at that time, clean the plant with paraffin emulsion. Scale and mealy bug often attack the plant, whether it is grown indoors or outside. A dressing of well-rotted manure about the roots will do good if applied in spring.

HERBACEOUS PHLOXES (E. B.).—The following should meet your requirements. All are hardy and free flowering: Etna (deep red), Flambeau (orange scarlet), G. A. Ströhlein (scarlet), Boule de Feu (bright red), Elizabeth Campbell (salmon pink), Lindfield Beauty (salmon pink, with lighter centre), America (rosy centre), Jules Cambon (rosy pink), Selma (cherry red), Aquillon (glowing crimson), King Edward VII. (rich crimson), Evènement (rose pink) and Emile Littre (intense crimson). If to the above you would like to add other shades of colour, the following are all distinct and good: Mrs. E. H. Jenkins (snow white), Frau Ant. Buchner (grand white), Iris (deep heliotrope), Le Mahdi (violet), Eugène Danzanvilliers (lilac mauve, white centre) and Queen Alexandra (pale blue and silvery grey).

TREATMENT OF HELIANTHEMUM (A. M. P.).—In an ordinary way, and assuming the plants are of considerable age and size, we should have preferred to prune them back at the end of July, after the main flowering. In your district (Cornwall) it may be done even now, though we should advise this in a general way. The best plan of all, when the plants are getting out of hand a bit, is to prune them in February or March, and make up your mind that you would get no flowers in the year of pruning. But you would be preparing the plants for another year's work by giving them a full season's growth ahead. Apart from these things, the pruning of such plants should be anticipated, and by yearly keeping them within bounds dispense with that harsher method of cutting back which time often renders necessary.

SELECTION OF HERBACEOUS PHLOXES (Una).—The variety of Phloxes to which you refer are out of date. The following are among the more recent introductions: Jules Verne (clear blue), Frau Ock Buchner (white and rosy lilac), Königshofer (orange scarlet), Emmanuel Arene (deep blue), America (salmon rose), Asgir (brilliant scarlet), Albert Vandal (violet blue), Jules Cambon (rosy pink) white eye, Widar (Parma Violet blue), Lindfield Beauty (salmon), Frau Ant. Buchner (pure white), Mrs. E. H. Jenkins (not a novelty, but one of the grandest of white-flowered Phloxes), Le Mahdi (dark violet blue), Iris (crimson purple), Monnet Sully (orange scarlet), Etna (crimson scarlet), Esperance (rosy mauve), Météore (bright rose pink), Selma (salmon pink) and Splendens (vermillion). These include some of the best in cultivation at present.

PHLOXES DISEASED (M.).—Two of the stems, from their appearance, would suggest the presence of stem celworm at an earlier date. We did not, however, find any in those submitted for our inspection. All the stems sent, however, give proof of being very old plants, and their inferior condition might be due to deterioration. Spring propagation would be the best means of improving the condition of the plants, and if you lift some of the old plants in February and place them in a frame, new growth will be encouraged and cuttings of the right stamp rendered available. In taking the cuttings, select only those from healthy plants, which in all probability will grow away cleanly and well. You should take care to give the young plants an entirely fresh position and a deeply-cultivated soil. If you can command the slight warmth of a greenhouse, the cuttings would root more quickly than in a cold frame. Only the fresh portions of the growing plants should be used as cuttings.

CARNATIONS FAILING (M. S. F.).—We do not understand your non-success with these flowers, and can only suggest that some local influence is at work which you fail to appreciate. Are you sure as to the immunity of the soil from wireworm, and, if so, have you examined the stems below ground to see that no other insect pest is attacking the plants? Then, again, in what proportion have you used the sea-sand, and was it fresh, or had it been long exposed to the weather? If the former, that might be a cause of failure. Your rather heavy loam, unless very retentive of moisture, should suit these plants fairly well. The plants are not likely to do well if placed near the edges, though at some distance therefrom they might flourish. As for the flowers lying on the rocks, that is a matter for individual taste. If the soil is good and of fair depth, the Carnations might succeed on the rock bank if this is not too steep. You say nothing about the style of plant you have been employing or the season of planting. Generally, from your letter we should attribute the failure to poorly-rooted plants and indifferent cultivation.

TREES AND SHRUBS.

DESTROYING A HOLLY TREE (*Desider. Brompton*).—You can kill your Holly tree by exposing the main roots, boring holes in them and filling the holes with salt; or you may bore several holes in the trunk and fill them with salt. The removal of the bark will kill the trunk but not the roots. When the branches are killed, cut them off to within 6 inches or 9 inches of the trunk, and plant your Roses to grow over the snags. You may grow your Roses over the Holly without cutting the branches off; but the dead branches and leaves will look ugly until the Roses are strong enough to hide them.

TO PRUNE ROCK ROSES (*Rockery*).—The correct time to prune Rock Roses is as soon as the flowers are over. You may cut them back fairly hard, say, to wood which is three years old. When the plants are very large and old, however, it is sometimes preferable to destroy them and commence again with young plants, which may be easily rooted from cuttings inserted in sandy soil in a close frame during summer. If you do a little pruning each year, it is possible to keep the plants within bounds for a considerable time without having to prune them back into old wood and make them look ugly. If you simply wish to reduce the size of your plants without giving a general pruning, that work may be done at once.

HARDY EUCALYPTI (*Suffolk*).—The hardest of the different species of Eucalyptus are *Gunnii*, *coccifera*, *corata* and *urnigera*, the first named being entitled to the premier position. If the choice is limited to the five kinds mentioned by you, we should select the first four, thus leaving out *iminalis*. The best time to sow the seed is in the spring. It should be sown under glass, and the young plants be potted singly when they are large enough to handle. Then the following spring, when the frosts are over, will be a good time to plant them in their permanent quarters. We think your idea of planting the young trees 8 feet apart, with sheltering rows of Tamarisk, a good one, and cannot see that it can be improved upon.

DWARF SHRUBS (*A. C.*).—We fear that you have set us an impossible task, for we do not know of any low-growing shrubs with blue glaucous foliage and lilac or yellow flowers. Although none of these fits in with your requirements, the following are worthy of consideration: Lavender with its restful greyish foliage and well-known flowers; *Caryopteris Mastacanthus*, which has hoary leaves and spikes of blue flowers towards the end of summer; and *Ceanothus*, which, if pruned hard back each spring, may be kept near the stipulated height, one of the best blue-flowered kinds being *Indigo*. The leaves, however, are green. *Halmidodendron argenteum* is a silky-leaved shrub with purplish pea-shaped flowers. *Cytisus nigricans*, with yellow flowers, is about the height needed, but the leaves are not glaucous.

FALSE ACACIAS GOING WRONG (*F. W. H.*).—As you say that your False Acacia is badly infested with a scale insect, it is probable that this is the reason why the leaves have turned yellow. If such is the case, you should spray your tree with a caustic wash as soon as the leaves have fallen. Such a wash may be prepared as follows: Dissolve 1 lb. of caustic soda (98 per cent.) in 4 gallons of water. Then dissolve a quarter of a pound of soft soap in 1 gallon of water. Into this mix 2½ pints of paraffin to form a creamy liquid. Then mix the caustic soda and paraffin emulsion together, and spray over the affected tree. Use the mixture as soon as the leaves fall, and again in spring just before the buds burst. About the beginning of May commence spraying the tree once every ten days until the middle of June with paraffin and soft soap, but without the caustic soda. This will kill any young insects which may hatch out. It is possible that the root or trunk injury may be responsible for the bad condition of the tree, or partly so, and if that is the case there is little hope for it. You may safely reduce the heads of your trees to a diameter of 3 feet. The work may be done any time before the middle of February.

ROSE GARDEN.

ROSE FLOWER OF FAIRFIELD (*T. Day*).—This Rose is known as the Perpetual Crimson Rambler, and is badly addicted to mildew. We think you would find *Grüss* an Teplitz a far more beautiful Rose.

ROSES FOR SOUTH-EAST WALL (*F. P.*).—To replace the Belle Lyonnaise we should recommend *Mme. Gerard*, Climbing K. A. Victoria or Climbing Papa Gontier. The border should be deepened, say, to 3 feet; and provide the Rose with some good, well-rotted manure as well as some basic slag to the lower soil. A nice fragrant climber would be Climbing Lady Ashtown, Ards Rover or Florence H. Vetch.

ROSES FOR SMALL ARCHES (*T. B. W.*).—As you require Roses of less vigour than the ramblers, you could not do better than plant the following: Light varieties—*Alister Stella Gray*, *Aimée Vibert*, *Trier*, *Lady Waterlow*, Climbing Lady Ashtown, *Johanna Sebus* and *William Allen Richardson*. Dark varieties—*Hugh Dickson*, *Grüss* an Teplitz, *Sarah Bernhardt*, *Zepherin Drouhin*, Climbing Liberty and Longworth Rambler.

ROSE FOLIAGE BLIGHTED (*J. R. D.*).—The foliage sent is infested with orange fungus. It appears late in the season and rarely does much harm, and you can do little now to stop it. Another year spray early and often with Bordeaux mixture. All fallen leaves should be burnt, and the surface soil about the plants removed in winter and also burnt. Only an inch or 2 inches of the surface need be removed, and this could be replaced by other good soil and manure.

ROSE DELIGHT (*H. E.*).—Yes; this is a very good variety, not so very distinct, however, from *Maiwatha*, and it is certainly not equal in value to *Alberic Barbier*, one of the loveliest of all wickurianaes. There is a great advantage in having wickurianaes Roses on their own roots, and we differ widely from Mr. Pearson as to *Lady Gay* not growing on its own roots. We have this Rose in this form growing most luxuriantly, and have not found one of the wickurianaes but what will succeed upon its own roots. Shower of Gold is a most beautiful variety, and will be largely planted when better known. Its delightful foliage alone recommends it. One may say the flowers are a shade or two deeper than *Alister Stella Gray*. It lacks the perpetual character of this latter Rose, although it makes up for this in its extraordinary vigour. We suggest planting both on one arch, the one to give continuous blossom, the other to quickly clothe the foremost part of the arch.

LAYING OUT A SMALL ROSE GARDEN (*M. S. W.*).—We think you would like parallelogram beds better than oblong ones to surround the circular bed in the centre. These parallelogram beds can be made any length, but their width should be about half the diameter of the circular bed. We would suggest the central bed of a good red rather than a white, and you would find *General Macarthur* a more tidy grower than *Grüss* an Teplitz. This latter is all very well in a large rosery, for its growth is so strong. It is, like *J. B. Clark* and *Hugh Dickson*, quite unsuitable for ordinary bedding. *Mme. Abel Chateaux* and *Caroline Testout* would be all right for pinks, although we should prefer *Mme. Leon Pain* to the latter, and for a yellow *Mme. Ravary* would do well, but we could not well recommend *Lyon Rose*. It is rather erratic. In some gardens it grows splendidly, and in others it is a failure. We would advise either *Duchess of Wellington* or *Artium B. Goodwin* as an opposite companion to *Mme. Ravary*.

THE GREENHOUSE.

MIGNONETTE (*A. C.*).—It is most essential that the Mignonette be given a good light position, and have plenty of air at all times. Failure to comply with these requirements is, no doubt, the cause of your non-success. In order to grow Mignonette well, the soil should consist mainly of good loam, with an admixture of broken brick rubble and sand. It should also be pressed down very firmly. In addition to this, the soil must not be kept too wet.

BLUE HYDRANGEA (*A. C.*).—It is a difficult matter to ensure blue flowers on the Hydrangea, though a fair measure of success is (if the soil is quite free from lime) obtained by watering the plants occasionally with alum water, at a strength of 1oz. to each gallon of water. Iron, too, is employed by some, the method followed being to mix about a tablespoonful of iron with each peck of soil, and in addition, as the pots get well furnished with roots, put a pinch in the water about once every week. If in the open ground, the plants can be watered with the mixture. Some nurserymen make a speciality of blue-flowered Hydrangeas, but the method employed is a trade secret.

LAPAGERIAS (*Suffolk*).—The cause of your Lapageria leaves turning brown and dropping off is that they are badly attacked by thrips, which are present in great numbers. We have invariably found that the XL All Vaporiser is perfectly effectual in destroying these pests; that is, perfect insects, though occasionally some of the eggs may escape. The remedy for this is to vaporise three or four times at intervals of about a week. Instead of this you may, if you wish, syringe with one of the many insecticides that are now to be obtained. Another point concerning your Lapagerias is that, judging by the leaves sent, we should say that the roots are not in a very satisfactory condition, and sickly plants are far more prone to the attacks of insects pests than healthy ones. If the condition of the roots is attended to, it will doubtless in the future do a good deal towards keeping these pests away.

SPORT FROM CHRYSANTHEMUM: J. C. GRIEVE (*R. B.*).—The blooms you were good enough to send us are absolutely identical with those of an old Continental introduction bearing the name of *Mme. Casimir-Perier*, the blooms of which have a creamy white centre, tinted pink, just like the flowers you sent to us. *Mme. Casimir-Perier* gave a sport of a beautiful yellow colour, shaded and striped red, and this sport bears the name of *Mrs. A. Willis*. The latter has frequently reverted to the original, and the original has often sported to the same colour. Your plants are therefore of no more than ordinary value. *J. C. Grieve*, the name of the plant from which your sport was derived, is unknown to us, and is not catalogued by any of our leading specialists, nor is it in the catalogue of the National Chrysanthemum Society. It is possible that it may be identical with *Mrs. A. Willis*, to which we have called attention, hence the reason of your possessing the sport that is none other than *Mme. Casimir-Perier*.

FRUIT GARDEN.

INJURY TO PEAR LEAVES (*F. W. R.*).—The Pear leaves have been badly infested with the Pear leaf-bliester mite, *Eriophyes Pyri*. These mites winter in the bud scales. In spring they enter the leaf and cause the formation of small galls. Eggs are laid within these, which soon hatch out to produce mites. These make other galls, and so the process goes on through June, July and August. As the galls grow older they change colour, ultimately becoming black. Infested leaves should be hand-picked as far as possible. Apply the lime, sulphur and soda wash twice—early December and February. Spraying must cease

in spring as soon as the bud scales are fully opened. Lime, sulphur and soda wash: Lime, 3lb.; sulphur, 3lb.; caustic soda, 1lb.; soft soap, 1lb.; water, 10 gallons; or quantities in proportion.

CREOSOTE AND GRAPES (*F. F. M.*).—It is well known that fruit does absorb the flavour of the material by which it is closely surrounded. A case in point is Apples or Pears packed in or stood on straw in the fruit-room. The straw becomes more or less damp by the moisture resulting from the sweating of the fruit, causing it to become musty and of unpleasant odour, which, as we know too well, is communicated to the fruit. But we were not before aware of the extreme sensitiveness of Grapes in this direction. How often it has happened in our experience that we have tasted Grapes in all other respects seemingly all right, and having a peculiar, foreign and disagreeable flavour. This is also often the case with Melons, and sometimes even in the case of Peaches. Does your experience with the creosote and your Grapes give a clue to the causes in so many other cases?

MISCELLANEOUS.

FUNGUS ON RUSTIC CHAIR (*F. S.*).—It is probable that the wood of your chair is full of mycelium, hence the repeated growth of the fruiting stage of the fungus. All that you can do is to soak the affected parts in a strong solution of carbolic acid or permanganate of potash. This may be done by applying the liquid repeatedly with a paint-brush. Should it not prove effective, remove the fungus-infested sections and make up with new wood.

POOR LAWN (*A. H.*).—You cannot do better than rake your lawn over with an iron-toothed rake to take out as much of the moss as possible; then give a surface-dressing, 1 inch or 2 inches deep, of rich soil. Apply the dressing early this autumn and keep the soil raked well about until it disappears. Where the grass is very thin, a little new seed may be sown next spring. Prick the thin places up with a fork, sow the seed, rake it in and roll lightly. About May a dressing of bone-meal may be given with advantage. Do not play on the lawn next year until the grass has filled up well.

FRENCH GARDENING (*Intensive*).—Instruction in practical intensive culture on the French market-garden system may be obtained at the Burhill French Garden, Walton-on-Thames; or at the French Garden, Shepperton, both large and well managed. The system may be practised in most parts of the kingdom, but preferably in localities where there is a clear, pure atmosphere and a good supply of light during the winter months. Most parts of England and Ireland are suitable, and also the South-West of Scotland. You will find full particulars of the system, with cultural instructions, in "French Market Gardening," published by John Murray, 3s. 6d. net.

ORIGIN OF MARGUERITE CARNATION (*W. T. S.*).—There appears to be a certain amount of doubt regarding the origin of the Marguerite Carnation; but, according to the late Mr. James Douglas in "Carnations and Pinks" of the "Present-Day Gardening Series," the writer was informed by Mr. Ernest Benary that some say it originated in Sicily, also that Messrs. Dammann and Co. and a Mr. Hildebrand both claim to be the first to have grown the plants. The members of this section are not hardy and perennial in the same sense as are border Carnations and Pinks. They are, as a rule, raised from seed sown early in March, and the young plants grown either in pots or planted out. In this latter case they are lifted about the end of August, so as to become established in pots before winter. They are chiefly employed for flowering at that season, and in a temperature of 55° will yield a quantity of blossoms.

FAIRY RINGS IN GRASS (*W. H. B.*).—By brushing up the small Toadstools, which appear about the fairy rings on your lawn, you are spreading the disease. The Toadstools are the fruiting stage of the fungus which causes the trouble, and by disturbing them in the way you describe, the spores are distributed about the lawn. A better plan would be to pick them off carefully and burn them. There are two ways of eradicating the fungus. One is to water the rings well with a strong solution of sulphate of iron. The other is to dig the soil out in the region affected to a depth of 12 inches and make up with new soil. As the mycelium of the fungus spreads in an outward direction, the soil should be removed to a distance of 3 inches or 4 inches beyond the outer part of the circle; but there is no reason to go beyond the inner part of the ring. The latter is the most efficacious method of dealing with the trouble, for when sulphate of iron is used, new turf has to be laid afterwards, and unless the ground is thoroughly soaked, some of the mycelium is almost certain to be left alive.

NAMES OF PLANTS.—*Fern Dole*.—One of the many hybrids of *Veronica speciosa*.—*C. S. S. J.*—*Salvia rutilans* (Pineapple-scented Sage). This was the only specimen enclosed.—*Rev. R. H. W.*—All three are evidently *Saxifraga* hybrids, which it is impossible to name in this condition. No. 1 and 3 appear to have some *S. longifolia* or *S. crustata* in them, while No. 2 may be a hybrid of *S. aizoon* and some other.

NAMES OF FRUIT.—*Holme*.—Apple Quern Caroline.—*J. T. S.*—Burondeau.—*J. T.*—Beurré Diel.—*An Old Subscriber*.—Apple Court Pendu Plat and Pear Swan's Egg.—*A. E. D.*—Bergamotte Esperen.—*A. R. T.*—18, Ribston Pippin; 19, Jolly Beggar; 20, Beurré Dumont; P. Aston Town; 9, Maréchal de la Cour; A, Wormsley Pippin; A3, Warner's King; A4, Alfriston; A5, Venus Pippin; A6, Royal Nonsuch; A8, Victoria; A9, Lamb Abbey Pearmain; A11, American Mother; A12, Bess Pool



THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

NOTES OF THE WEEK.

Dates of Shows for Next Year.—We shall be glad if the secretaries of horticultural societies who have not already done so will send us the dates of their shows for next year, so that they can be included in the almanack that we are presenting with our Special New Year Number.

The Potato Crop in England and Wales.—According to the preliminary statement just issued by the Board of Agriculture, the total production of Potatoes in England and Wales is estimated at nearly 2,244,000 tons, which represents, on an area of 463,000 acres, a yield of 4.85 tons per acre, the lowest since the returns of produce were first collected in 1884. The worst return previously was 4.97 tons per acre in 1907.

Primula obconica in Glasgow.—Among the finest plants of this Primula that we have recently seen are those in some of the Glasgow parks. Mr. Thompson, who has charge of the Springburn Park, under Mr. James Whitton, the Superintendent of the Glasgow Parks, has a specially fine strain, to which it is evident much care is devoted. One could hardly find a poor one among the plants, and they surpass, or at least are fully equal to, some noted strains which have won prizes at prominent Scottish exhibitions.

The Florida Water Hyacinth.—This is the popular name of the well-known stove aquatic Eichornea crassipes. This plant floats freely upon the surface of the water without the roots being anchored in the soil. In warm countries, where this plant has been introduced by virtue of its interest and beauty, it has increased at such an enormous rate as to impede water traffic and choke waterways. As a stove aquatic it is a plant of great beauty; its many flower-racemes in violet blue make it a charming subject for a warm Water Lily tank.

The Orange-berried Holly.—A correspondent sends us a Holly shoot laden with berries, which, instead of being of the typical yellow-fruited kind, are orange flushed with red. Plants bearing fruits of this character may often be noted in a batch raised from seeds of the yellow-berried Holly (Ilex Aquifolium fructu-juteo), while such a variety has been given the varietal name of fructu-aurantiaca and the popular name which heads this note. The yellow-berried plant has been known for several centuries, and old gardening books inform us that it was found wild in a wood near Wardour Castle in Wiltshire, and also at Wiston in Suffolk. A form with white berries has been described, but it is doubtful whether it is now in cultivation.

The Shrewsbury Show Secretaries.—The many supporters of the Shrewsbury Show will learn with regret of the resignation of the hon. secretaries, Messrs. Adnitt and Naunton, who have acted in that capacity since the Shropshire Horticultural Society was established thirty-eight years ago. The Shrewsbury Show is one of the largest of its kind in the country, and since it was first held the society has granted donations amounting to nearly fourteen thousand pounds to the Shrewsbury Corporation for the improvement of the show grounds, public buildings and institutions.

New Zealand Daffodils in London.—We understand that there is a possibility of all the best and newest Daffodils that have been raised in New Zealand, and some of which were commented upon by Mr. F. Herbert Chapman on page 598 of our issue for November 30, being grown in this country and exhibited in London. This will enable us to judge of their merits and to compare them with the latest productions of raisers in this country. We are not at liberty to divulge details of the proposed scheme at present, but, should it mature, it will be of considerable interest and value to Daffodil-lovers.

A Noble Tropical Plant.—For the last two months Brownea Crawfordii has been the centre of attraction in the Palm House at Kew, for it has carried a large number of inflorescences of bright scarlet flowers. The various species of Brownea are natives of Venezuela and Colombia, but several hybrids have been raised, and of these B. Crawfordii is not only one of the best, but one of the most beautiful members of the whole family. Forming a tree with a wide-spreading head, it produces long, pinnate leaves and terminal heads of flowers. It is only in a large house with a tropical temperature that the plant does itself justice.

Three Good Red Currants.—These useful fruits are extensively cultivated in both large and small gardens, but the best forms are not always selected. We have found that Raby Castle, La Versailles and La Constante are a trio of the best, and can be procured for a moderate outlay. The first may be described as a good one for general purposes; the second can be employed as a cordon, and if planted on a north wall or border the supply of Currants will be prolonged. The berries are large, and the bunches are produced in abundance. La Constante has no equal as a late variety, the big red bunches remaining in excellent condition for several weeks after other Currants are finished. Now is a good time to plant all small fruits. In town gardens sparrows often do much damage to Red Currant and Gooseberry bushes at this season by eating the buds, and where trouble of this kind is likely to occur some old fish netting should be spread over them.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Injury from Chrysanthemum Rust.—I should like to ask if any of your readers have felt any ill-effects from the Chrysanthemum rust? I and my foreman were arranging groups of standards in the conservatory, and the day following we were both swollen to an alarming degree on all exposed parts of the body. My medical adviser diagnosed it as uraturia, a mild form of blood-poisoning; and he thinks, too, that it was probably set up by the Chrysanthemum rust. No pain accompanied it, but severe irritation.—FRANK W. SARGEANT.

A Beautiful Berried Shrub.—We have in *Coriaria terminalis* a shrubby plant of some beauty and distinctness, owing its principal charms to its elegant growth, its autumn berries and the colouring of its autumnal leaves, the three combined rendering this *Coriaria* a plant of some attraction for places where it will fruit freely. In cold situations

ease with which *C. longiflorus* can be grown in the alpine garden may be realised when it is stated that the group shown in the accompanying illustration consisted, four years ago, of three small corms, which have remained untouched in their present position in very ordinary soil, consisting of heavy loam, road grit and a small quantity of leaf-mould; aspect, full south.—REGINALD A. MALBY.

Fragrance in Chrysanthemums.—I am much interested in the references to the single-flowered Chrysanthemum Eric Harvey in a "Note of the Week," issue October 26, and again on page 598, November 30. The variety in question is stated to be very fragrant, which is a step in the right direction. Probably the variety your correspondent C. Turner refers to is *Ladysmith*. The old hirsute variety, Mrs. Alpheus Hardy, was the sweetest-scented Chrysanthemum I ever grew. Another hirsute variety, *Louis Boehmer*, is also fragrant. Several other sorts, not now in cultivation, were very fragrant. The newer one, Mrs. G. Hemming, a large Japanese, is very fragrant,

with the added virtue of fragrance is sure to become popular. The flower, from the description in a "Note of the Week," October 26, *re* Eric Harvey, I should think is somewhat similar in colour, and in an early issue I shall hope to hear of others possessing this hitherto unknown virtue.—A. E. BRADY.

Cercidiphyllum japonicum in the United States.—The reference to *Cercidiphyllum japonicum* on page 574 of THE GARDEN for November 16 leads me to report that this species makes a first-rate tree in Massachusetts. We have a number of beautiful specimens growing in the College grounds, and there are others in the town. In "Bailey's Cyclopædia of Horticulture" this species is said sometimes to reach 100 feet in height; but this must be in Japan, for I feel sure there are no such specimens in America. It colours very nicely here in the autumn, but does not compare with the Japanese Maples nor with our native American Maples, nor, indeed, with many other of our American trees and shrubs.—F. A. WAUGH.

Snow and the Germination of Seeds.—The recent snowfall and the near approach of the seed-sowing time induces one to ask for the experience of others respecting the hastening of germination in certain seeds by a covering of snow, and to mention one or two things regarding this. It will be observed that in early spring, immediately after a fall of snow, many seedlings of hardy plants—perennial, biennial and annual—appear. In the case also of certain seeds sown in pots, pans or boxes, if they are covered with snow and this allowed to remain on for a few days before it melts, the germination of these seeds appears to be hastened. This is particularly the case with seeds which are slow or irregular in their germination, and it has long been the practice of certain raisers of Auriculas from seeds to take advantage of this when suitable weather occurs. I have tested this, and have found that the germination of Auriculas and other Primulas is really hastened by this covering of snow. It appears to me that this practice is specially useful with seeds which are usually very slow. The Gentians and some of the awned Anemones are instances. Perhaps others may add their quota of experience.—S. ARNOTT.

Dinner-table Decorations.—At all the principal haws throughout the country there are classes provided for dinner-table decorations. Where the flowers used are restricted to Carnations, Roses, Chrysanthemums, Narcissi and Tulips, with any kind of foliage, and a maximum height is given which must not be exceeded, the competitors are placed on a fairly equal footing. This is never more clearly defined than in the case of Sweet Pea tables. I hold that all competitors should be given as wide a range as possible in the matter of dinner-table decorations, but I think that committees and those who frame schedules should stipulate that spaces be left on the tables for the large plates at least. Often enough one sees the whole of the table covered—very charmingly, too, as regards the floral designs—but no space is left for plates. I do not intend going into the merits of high *versus* low decorations, on account of taking up too much valuable space, but would simply say that I favour low designs which are graceful and light and not necessarily squat in appearance, and plain glass vases for the flowers to be placed in. One large plate for each diner should be placed in position on the table, but no glasses, knives, forks, nor spoons. I am quite sure that inexperienced decorators would gain a clearer insight into the manner in which a table for diners should be furnished with flowers and foliage.—G. G.



CROCUS LONGIFLORUS, A BEAUTIFUL AUTUMN-FLOWERING SPECIES, IN THE ROCK GARDEN.

it seems hopeless to expect it to fruit; at least, the writer has tried it for seven years or so in succession in a cool, though not cold place without being favoured with any fruit. In warmer positions, however, it gives handsome, arching branches, bearing at their summit clusters of bright yellow, Currant-like fruits in August, while later the foliage dies off a good red.—S. A.

A Beautiful Autumn Crocus.—One of the brightest patches of colour in my garden at the middle of November was *Crocus longiflorus*. At the time of writing it was in its full glory of rosy lilac, and when a warm gleam of sunlight pierced the smoke-laden air, the rich orange stigmata gleamed within the lovely chalice rising from the dark soil, accompanied to about half their height by the grass-like foliage. While in general aspect the Crocus is not unlike *C. speciosus*, it is dwarfer and more refined, both in shape and colouring, while *C. speciosus* generally flowers about September and early October, and is, so far as I have grown it, unaccompanied by any foliage. The

and I have for many years noticed that the purple, violet and amaranth coloured varieties are more fragrant than any others. When the sun shines on the blooms is the time when their fragrance is most perceived, and more single-flowered varieties than those of any other section are sweet-scented.—G. GARNER.

— In response to your invitation in the note under "Fragrance in Chrysanthemums," November 30, I may say that early in the spring, having added single varieties to my small collection, one of these named Good Hope, a deep puce-rose coloured variety with a white zone circling a bold yellow disc, was most pleasantly fragrant. My friends said it was like Honey-suckle, only more "almondly." We first noticed the perfume indoors in blooms in a cut state with other flowers. It was so sweet and agreeable that we sought out what it could be, never dreaming it was the Chrysanthemum; we found it was, however. The flower, owing, I think, to the white zone, was most attractive, and always invited attention, and

How to Exterminate Moles.—Your correspondent H. C. Wood, page 598, issue November 30, gives some very useful hints on this subject. It may be interesting and useful to add that moles have their regular times for feeding, namely, at six o'clock and nine o'clock in the morning, again at noon, at three o'clock in the afternoon, and at six o'clock and at sunset. If one waits patiently about six yards away from the last-made hillock he may see the new one rising, and when it is nearly complete he should step up carefully and dig out the mole, treading down the newly-made run at the same time. Moles generally have their home in a dry bank, and from it make a main run or tunnel to the feeding-ground. The trap should be set in this main run.—B.

Teuerium fruticans.—Although this evergreen shrub is not hardy enough to stand uninjured through a winter of ordinary severity in the Midlands, it thrives excellently in Devonshire, Cornwall and South Wales in the open ground, while about London it gives very good results when planted against a wall. Belonging to the Sage family, it does not show any marked resemblance, except in the formation of its flowers and by its square branches, to any of the Salvias, for its woody shoots are long and slender and, when young, covered with a dense white felt. The ovate leaves are similarly covered on the under surface, and are greyish green above. The flowering season is a very prolonged one, for it extends from early summer until the approach of winter, the lavender or bluish flowers being borne from the leaf-axils near the points of the branches. No difficulty need be experienced in its cultivation, for, providing climatic conditions are favourable, it thrives in any good garden soil. Cuttings may be rooted with ease in sandy soil in a close frame during the summer.—D.

The Gargano Bellflower.—This is *Campanula garganica*, which should be represented in every garden in one or other of its forms. It is more suitable for the rockery than for the border, although it may be cultivated in the latter near the front, or, where there are rock edgings, over these. The different forms all make low, trailing plants of neat foliage, profusely covered for a long time in summer with pleasing open blue flowers. Trailing over the rocks and stones of the rockery they are exceedingly pleasing. *C. garganica* itself has charming glossy, neatly notched leaves and good blue flowers, and is a capital front-of-the-border or rockery subject. There is also a pretty white variety of this named *C. g. alba*. A favourite form is *C. g. hirsuta*, which has pleasing greyish, downy foliage and delightful open flowers of light blue with a white centre. It is probably the best of the Gargano Bellflowers. There is also a white variety of this called *C. g. hirsuta alba*. *C. garganica* and its varieties are easily grown in light soil, and flower more freely and last longer in partial shade than in sun.—S. A.

FORTHCOMING EVENTS.

December 16. — National Chrysanthemum Society's Executive Committee Meeting at Carr's Restaurant, Strand, at 7 p.m.

December 17.—Royal Horticultural Society's Committee Meeting (no exhibition).

December 19.—Linnean Society's Meeting.

December 30.—Hereford Fruit Show (two days).

January 7, 1913.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster, S.W.

GARDENING ACROSTICS.

AS outdoor work is necessarily more limited in winter than in the other seasons of the year, it has been suggested that some of our readers might like to take part in an acrostic competition as a useful and profitable substitute for their usual activities in other directions.

Accordingly we propose to publish, from December 14 to February 1 inclusive, a series of eight double acrostics, each of which will relate entirely to gardening or simple botany. As a slight incentive we offer three prizes, of the value of £3, £2 and £1 respectively, which, at the close of the competition, will be awarded to the successful competitors under the following conditions:

1. Solutions must be sent to the Editor at 20, Tavistock Street, Covent Garden, London, W.C., within a week of the date of issue in which the acrostic appears; thus, solutions for that in the paper of December 14 must be received on or before December 21.

2. Each solution must be accompanied by the sender's name and address, and, if it is thought desirable, a *nom de plume* for publication as well.

3. Envelopes must be plainly marked in the left-hand corner "Acrostic."

4. The correct solution of each acrostic will be published weekly in due course, together with a list of all those who have sent the right answers. N.B.—We then propose to give, where necessary, explanatory notes and references to the more difficult "lights" in order to make the acrostics as useful and instructive as possible.

5. In all cases the Editor's decision must be final.

6. If more than one competitor has sent in correct solutions to all the acrostics, the prize-money will be divided on the following lines: If two, the money for the first and second will be added together and then divided; if three or more, the whole of it will be added together and then divided equally among the successful competitors. The second and third prizes will be similarly dealt with, supposing similar circumstances should arise with regard to them.

7. The names of the prize-winners will be published in THE GARDEN of February 15, 1913.

EXAMPLE OF A DOUBLE ACROSTIC.

My first is found in my last, and with it makes my whole.

1. Contemporary with the Almond and the Vine, I have been an inhabitant of the fruit garden from time immemorial.
2. The Woodbine in a Latin dress.
3. I make baskets, and sometimes divining-rods.
4. An old-fashioned Cheshire name of the Plantain.
5. Green I am bitter and tough—white I am crisp and mild.
6. The Rose Bay.

SOLUTION: "FLOWER GARDEN."

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EXPLANATORY NOTES.

* In "Johnson's History of English Gardening," pages 3, 16 and 17, it is mentioned as a garden

fruit in Jacob's time. † "Folkard's Plant Lore," page 113. Osiers are used as divining-rods by some Eastern nations. ‡ "English Plant Names," by Britten and Holland. Waybred (spelt in various ways) is a common local name for the Plantain, especially in Cheshire.

DOUBLE ACROSTIC No. 1.

My firsts: *The country of new plants.*

My finals: *The glory of an autumn border.*

My whole: *A much-developed annual. First made by Nature in the East, but now by man in the West.*

1. Famous in Miller's day for its garden, now for its show.
2. When I am a gay garden flower, I am an annual; but when I am eaten, I am a perennial.
3. I look a wee bit like a *Gladiolus*. I am, anyhow, much more beautiful than I was twenty-five years ago. The contents of my seed-pods suggest the name you seek.
4. The name a botanist gives to that part of a stem whence leaves spring.
5. I love the damp when living, and I can keep you from it when dead.

The solution to the above, with explanatory notes and the names of those who have sent correct solutions, will be published in our issue dated December 28.

CULTURAL HINTS ON NEW OR RARE PLANTS.

ALPINES.

Saxifraga apiculata alba.—This plant needs no recommendation beyond the fact that it is a valuable white sport from a plant which everybody admires. With all its attributes of vigour and free flowering typical of the original, it is destined for great popularity. Valuable alike for rock garden and alpine-house, it is a plant to grow. Easily increased by division.

Haberlea rhodopensis virginialis is considered one of the choicest of alpine gems for flowering in May and early June. The plant is a lover of cool rocks and a sequestered spot, and, while detesting much lime, delights in sandy peat and leaf-soil. Moisture, too, should be liberally supplied. In effect it is a miniature white-flowered *Streptocarpus*. Increased by division and seeds, when procreable.

Anemone nemorosa Allenii.—Those who know and prize the beautiful *Anemone robinsoniana* will be pleased to know that this is a far superior variety; one, moreover, that will luxuriate in rich, moist soils, and give a good account of itself when the time for flowering comes round. The plant is not a generous seeder, but may be divided when established. Plant now, burying the roots 4 inches deep.

Wahlenbergia vincaeflora.—Lovers of the choicest plants will welcome this elegant-looking subject with its never-ending array of gentian blue flowers on frail stems 15 inches or so high. The plant is in flower for weeks. I would suggest a protecting crevice for it in the rock garden, with a deep root-run of peaty or leafy loam. Seeds should be looked for as a good means of increase. It flowers from June onwards. Plant in spring.

(To be continued.)

TREES AND SHRUBS.

ORNAMENTAL BRAMBLES FOR WINTER EFFECT.

PLANT collectors in China during recent years have enriched our gardens by the introduction of many new trees and shrubs. Prominent among these are a considerable number of Rubi or Brambles. Mr. E. H. Wilson during his three expeditions collected seeds of fifty species and varieties. Exactly how many of these will



A NEW FORM OF THE WHITE-WASHED BRAMBLE (*RUBUS BIFLORUS QUINQUEFLORUS*).

find a permanent home in our gardens it is difficult to say at present, but at least ten or twelve species already give evidence of becoming popular.

The different species and varieties vary very much in growth, foliage and appearance generally. Several form large bushes with stout stems up to 12 feet or 15 feet in height; others produce long, slender, trailing shoots. Their principal value in gardens lies in the ornamental foliage and attractive stems. One or two of the better fruiting kinds, though in themselves not superior to our common Bramble, yet may prove of considerable value in the hands of the hybridist. The three most

noteworthy at present in this respect are *Rubus adenophorus*, *R. biflorus quinqueflorus* (see illustration), and *R. kuntzeanus*.

For Pillars and Pergolas their value and uses in the garden are considerable and varied. Those with long, slender, trailing shoots are suitable for pergolas, arches and pillars, particularly several of the evergreen species. The species with ornamental stems or attractive foliage are valuable for the shrubbery borders, beds in the pleasure grounds, or groups in open spaces in view of the woodland walks. When planting the white-barked Brambles, to get the best effect at least eight or ten plants should be grouped together. A selection with attractive stems in winter are *R. biflorus* and the variety *quinqueflorus*, *R. giraldianus* (see illustration), *R. lasiostylus*, *R. mesogæus* and *R. thibetanus* (*Veitchii*). Evergreen species suitable for clothing pergolas, arches, verandahs and pillars include *R. bambusarum*, *R. flagelliflorus*, *R. Parkerii*, *R. playfairianus* and *R. Swinhoei*. The best of the deciduous species with ornamental foliage are *R. giraldianus* and *R. thibetanus* (*Veitchii*).

Cultivation.—Though their cultivation in the ordinary way presents no difficulties, these Chinese Brambles respond readily to good culture of the soil. A rich loamy soil, well worked, and a mulching of decayed manure increase considerably the vigour and beauty of the plants. With the deciduous species, particularly those with ornamental stems, it is very desirable to cut out the old growths in autumn, to expose the full beauty of the previous summer shoots. Layering the shoots forms a ready means of increase, and those species which fruit freely may be propagated from seeds.

RHODODENDRON RUBIGINOSUM

ABOUT twenty years ago this and several other Rhododendrons were introduced by Messrs. Veitch from Western China, and it was soon seen that they were likely to prove useful additions to the various species which were already in cultivation. Growing about 3 feet high, *R. rubiginosum* is distinguished by its reddish brown stems and by its leaves, which are from 2 inches to 3 inches long, being covered with small, rounded, brown scales. The flowers are 1 inch to 1½ inches across, and are borne in small terminal heads. Their colour is rosy red, and when at their best they make a very bright display. It was one of the discoveries of the Abbé Delavay, and is said to be common on the Tsangshan Mountains in Yunnan at elevations varying between 6,000 feet and 7,000 feet. A companion plant which appeared about the same time from the same region is *R. yunnanense*. This often grows about the same height, though it may become much taller, and bears white Azalea-like flowers,

which are marked with red on the upper petals. Both plants are desirable sorts to grow in gardens where the dwarfier kinds of Rhododendron are encouraged. Where collections of such species do exist, they provide a never-ending source of enjoyment, for all are beautiful, and a very wide range of habit and variability in flower is exhibited. D.

THE ROSE GARDEN.

NOTES ON THE NEWER ROSES. TEAS FOR EXHIBITION.

(Continued from page 612.)

Mrs. Herbert Hawksworth (Alex. Dickson and Sons, 1912).—As seen growing at Newtownards this July I was very much struck with the beauty of this Rose. It is a flower of much substance and many petals, of a more globular form than is generally associated with a Tea Rose. It is pure white in colour, especially in the fully-developed flower, and when better known will be in much request among exhibitors, as weight, quality and perfection of shape are marked characteristics. It is a good grower, and the plants I saw of it carried plenty of flowers. It is sweetly scented.

Mrs. Hubert Taylor (Alex. Dickson and Sons, 1909).—This has been frequently exhibited this season by amateur and professional alike. A pale blush in colour, fading to white at the edge of the petals, yet it is distinct alike in colour and shape, although so reminiscent of the old



THE SLENDER WHITE STEMS OF *RUBUS GIRALDIANUS*.

Mme. Cusin that I have heard it described as a sport of that variety. I do not think, however, it is so, as the growth is very unlike it, being much strouger, and the leaves are frequently seven in number. It was awarded the gold medal at Luton in 1909, and is a good, reliable Rose.

Mrs. Sophia Neate (S. Bide and Sons, 1909).—This can hardly be said to have been frequently exhibited, but a plant in my garden this year produced such excellent flowers that I am tempted to include it here, at any rate as a variety worth trying. Its flowers are salmon pink in colour, of good shape when well grown, and the plant is of quite good habit.

Nita Weldon (Alex. Dickson and Sons, 1909).—This Rose has improved immensely with me. The first year I had it I was inclined to label it decorative or garden only; but I have altered my opinion of it, and useful as it is for these purposes, it cannot be ignored by the exhibitor. It found its way into a good many boxes this year. It is a pretty flower and gained the gold medal at the Royal Botanic Show in 1908; good habit and very free-flowering.

Recuerdo de Antonio Peluffo (Souper et Notting, 1911).—The only new Tea Rose of Continental raising that I feel justified in recommending for exhibition purposes. It is, I should say, of Mme. Constant Souper parentage; but this is pure surmise on my part. The four plants I have had of it this season have given me some excellent flowers, considering they were only grafted. It is pale yellow, with a Picotee pink edge to the petals, requires protection from wet, but it makes a large, bold flower of distinct merit.

W. R. Smith (Smith, 1908).—This, I believe, is an American-raised seedling, a very fine grower that produces large flowers, nearly white, tinged blush on the outside of the petal, that will, however, come split "sometimes." This is its only fault, but it admittedly is a serious one. Personally, however fine a bloom was as regards colour and size, if it had a split I should hesitate to stage it. Still, that is not everyone's opinion, otherwise we should not find so many split flowers as we do in looking round the exhibition boxes of the trade and amateur alike. Still, I am sure there are less than there used to be, and I put that down entirely to the fact that a feature of most of the new Roses is that they produce so many more perfect flowers per plant than the older varieties. It is a coincidence only that I have to close my notes on exhibition Roses with a variety that does sin in this respect, in that a certain percentage, and not a small one, of its flowers come split. If they did not, the Rose under notice would be entitled to be placed very high in the list of the newer Roses.

Next week I hope to commence my notes on the newer decorative, climbing and other Roses, which are now so highly appreciated for garden decoration and for cutting. These Roses have been wonderfully improved in recent years, and there are plenty of good varieties available.

Southampton.

HERBERT E. MOLYNEUX.

ROCK AND WATER GARDEN.

ROCK GARDENS IN THE MAKING.

(Continued from page 613.)

Soils for Larger Areas.—In the last chapter I had something to say concerning soils and crevices and the importance of having all such well charged as the work proceeds, and in a concluding word urged a freer use of grit and finely-pulverised rock for all high alpine of the tufted class. These are those which for the most part bejewel the rock faces of the earth, and these are the things which we should endeavour to imitate in our gardens. But, after all, it is but a phase of Nature's work, albeit an important one, and there are others demanding attention and study. I refer to the plants more suitable for larger areas, for colonising on slope or miniature ravine, and those freer-growing subjects, such as many of the hybrid Phloxes, Bell-flowers, Primulas and others that, so far as they inhabit Nature's rock gardens at all, have a

assuming always that the writer has himself studied the subject—should play the part of the finger-post, the operator doing his share, as already noted. The practical-minded writer will, however, be able to direct pretty clearly by citing some of

The Object-lessons of the Garden Itself. For example, the Phlox, Campanula, Primula or Saxifraga that has demonstrated its complete happiness, freedom of growth, flowering and hardiness when grown on the fringes of the choice border, or as a carpeter to something else, is not the plant we need take into the rock garden to starve; common-sense alone should dictate that we give it a liberal fare. Yet it is surprising how often such teaching is ignored. A large number of the silvery Rockfoils are so much at home on the so-called "flat rockery," or even in touch with fat garden soils, that they appear indifferent to that class of soil upon which they are found in Nature, and which, after all, might prove to be but the merest circumstance to which the plants have adapted themselves through the centuries. The



THE DRIPPING WELL IN THE ROCK GARDEN AT KEW HAS BEEN REPLACED BY A SERIES OF MINIATURE CASCADES. THE LEFT OF THE ILLUSTRATION SHOWS THE ALTERATION IN PROGRESS, AND THE RIGHT SHOWS THE WORK NEARLY COMPLETED.

preference rather for the richer pasture soils of the uplands than for higher altitudes and rocks alone. For such as these we may, without hesitation, prepare a greater feast, giving them a foot or 15 inches of rock-charged soil, leaf-mould it may be occasionally, or even manure of a kind—that type of it from which all insect-life has been eliminated by heat, and which is capable of being rubbed through a fine-meshed sieve by the hand.

The Habitats of Many Mountain Plants are, however, as varied as the plants themselves; hence no hard-and-fast rule can be laid down. Rather should the gardener study the conditions of the plant in its wild state, and, with such knowledge acting as guide, counsellor and friend, broaden and deepen it by experiment and observation. In these, as in other matters, there is nothing like the school of experience, and the lessons learnt therein will, I am fully persuaded, sink far more deeply into the mind of the earnest student than the gleanings from columns of text. The text-books—

Cotyledon Saxifrages, the Aizoons and others of the silvery set are instances of this soil indifference, these growing well and flowering freely in cool almost pure sand, heavy, clayey loam, and on rocky dry slopes where the soil is chiefly old mortar and rubble. Generally, however, the highest encrusted development has been noticed where the plants were associated with limy soils. Hence there need be no slavish imitation of Nature, remembering always that we garden for gardening's sake, and to get the most out of the material and conditions within our reach.

The Bog-inhabiting Primulas of the Himalaya, and those others of the Swiss and Tyrolean Alps, afford instances of the impracticability of laying down hard-and-fast rules of culture. Moisture, or those near equivalents shade or rich soils, are essential to the former, while moisture—the constant moisture of the bog—might prove harmful to the others. If, however, we take such Primulas as *marginata*, *viscosa*, *intermedia* and its rather

numerous following, we shall find these greatly benefited not only by rich soils, but by that frequent division which also ensures in the subsequent replanting a re-burying of the stem, which in turn promotes a renewed root activity near to the rosettes of leaves. In Nature the constantly-accumulating *débris* from the higher slopes acting as a mulch is the equivalent of the deeper planting, and is the more important to those types or species which incline to thrust their stems out of the earth. Those that do this perish at their bases in proportionate degree, the root-fibres being, given certain conditions, more or less an annual production. A phase in rock garden construction not yet touched upon is

The Miniature Cascade, which, while adding a distinctive feature, will also permit of the inclusion of a variety of plants not possible otherwise. That shown in the illustration on page 625 will give an idea of what is meant, the pictures side by side showing the start and the nearly finished work. The example in question

A YEAR OLD ROCK GARDEN.

A YEAR ago the ground on which stands the rock garden, a corner of which is shown in the illustration, was flat, uninteresting and weed-bestrewn. It was a narrow strip in an unmade garden. With pencil and paper a little sketch of winding paths, raised mounds and dry, stony water-courses was drawn out, attention being directed to the proper curves of the paths, avoiding any straight or formal lines. With no natural facilities for imitating mountain scenery, the plan adopted was first to trench the ground, then to collect all the stones from other parts of the garden, pile them in heaps where height was wanted, and dig out the paths as deeply as the lie of the ground allowed, using the level frequently to avoid depressions. The earth taken from the paths helped to raise the mounds, and more earth was added till they were sufficiently high. Then came the placing of the rocks, perhaps the most fascinating part of the undertaking, and requiring no little strength

THE FLOWER GARDEN.

SOME FACTS ABOUT THE TULIP MANIA.

(1634 — 1637.)

(Continued from page 615.)

I HAVE dealt in my first article with the apocryphal tales; the curious bargains that were sometimes made between buyer and seller for valuable bulbs; and the contributory causes, which were mainly two, viz., the keenness of the rich Dutch themselves to have the very best collections possible, and the long-continued demand from Paris for the rarest varieties to enable the young gallants there to make suitable offerings to their lady friends. I now come to the most interesting question of how sales were conducted during the period when the mania was at its height; for it must not be supposed, as it easily might be, that buying and selling were then the simple and ordinary processes with which everyone is familiar. When the mania really broke out in full force, such was the mad rush of everyone (nobles and chimney-sweeps, dames of high degree and serving-maids, weavers and learned men) to take part in the huge gamble that special provisions had to be made in order that business might be carried on with some sort of seamliness and order. In the mania area proper the usual avocations of the people were laid aside, and their whole time and energies given to the acquisition and disposal of Tulip bulbs, or, to be more precise as regards a great part of this exciting period, of the slips of paper which recorded their bargains; for if one thing is more certain than another, the actual possession of the bulbs was the last thing the gamblers wanted. High prices and specially choice varieties were known in Holland in the earlier years of the century, for a contemporary writer, Nicholas Wassenauer, has recorded how the celebrated *Semper Augustus* was sold in 1623 for "thousands of florins," and in the beautiful copper-plates of the famous Utrecht engraver Crispin le jeune. in the "*Hortus Floridus*," we have excellent illustrations of some of the best pre-mania flowers.

The inference is that the Dutch would be more or less familiar with the lucrative business of selling well-known kinds, and doubtless the fortunate possessors were just as much envied as Clusius had been a generation or two before, when he alone had Tulip bulbs to cultivate. Their readiness, then, to embark on this trade of getting rapidly rich is not so surprising. The lighted match was all that was wanted. It came in 1634, and gradually the fire burnt fiercer and fiercer until the culminating point was reached in 1636-37. It is impossible to trace in detail all the steps which led up to the elaborate systems of bargaining which eventually became *de vigueur* in their transactions.

To begin with, bulbs were bought and sold as they are to-day, and as they always had been previously; then a system of weights was introduced, of which the unit was an *azen*, a small weight less than a grain. A bulb would be sold at so much per *azen*, and as its weight was recorded when it was planted, the purchaser would have some idea of the price he



A SMALL ROCK GARDEN TWELVE MONTHS FROM THE DATE OF CONSTRUCTION.

is to be seen in the rock garden at Kew, and is taking the place of the old dripping well which has long existed there. The present erection will afford more suitable accommodation for plant-life, and those phases of it in particular that will be more in keeping with it than the old. Doubtless presently we shall see some of the hardy Filmy and other Ferns there, while the shelving rocks, so well shown in the picture, will lend themselves in a variety of ways to effective planting. As will be seen by the left-hand portion of the picture, the entire erection is in touch with soil, a not unimportant matter. The presence of an arrangement of this kind also renders possible the rock pool at its base, while an adjacent bog bed, or even a tiny streamlet, might each in turn contain its complement, and, while rendering it more complete, demonstrate, if in minor degree, the wealth, variety and resource of rock gardening as a whole.

E. H. JENKINS.

(To be continued.)

and discretion. Here, again, lines and formality would spoil the whole effect, the idea aimed at being the copying of a natural mountain.

The edges of the path should have especial attention, variety in stone and outline being essential. The picture gives a good illustration of this. In the planting the same theory should be followed. An example is shown in the double Daisies growing here and there, as if they had seeded themselves; in the uneven grouping of Sedums and Saxifrages; in the mass of Dianthus in the foreground.

It is wonderful how quickly the plants make themselves at home in the crevices and pockets between the stones; how they grow and spread, till, all of a sudden, you realise that the coarser-growing things are taking more room than their share, to the detriment of some precious pigmy. A most attractive place is the rock garden, but one needing constant attention.

EDITH DELVES BROUGHTON.

would have to pay. Lastly, this principle was extended, and the individual bulbs were no longer thought of, but simply so many azen of this variety or of that, say, of a Gonda or a Viceroy, were bought and sold quite irrespective of the fact whether the weight made up entire bulbs or not. To regulate the trade, now so many had left their usual occupations and were joining in the speculation, collegiums, or clubs, were formed in all the chief centres. The procedure in them was as precise and formal as it is in the Stock Exchange to-day. Two methods of transacting business were allowed. One was called "met de Borden" and the other "in het Ootje."

The former was a sort of sale by arbitration, in which the chief factor, from which it took its name, were two slates or tablets, on one of which, first of all, the buyer wrote down the amount he offered; and on the other the seller that which he was prepared to accept. These were submitted to two umpires, one chosen by either party, who made their award by writing it on the two tablets, which were then returned to the interested parties, who accepted it or not by their allowing it to remain or rubbing it out. The other system, "in het Ootje," was a sort of auction, in which the highest bid was recorded in a curious figure shaped like this:

After the bidding was over, the seller was free to take the sum offered or not, as he pleased. Under both systems provision was made for contributions to the funds of the collegiums. Eating and drinking were an inseparable part of the whole. I always think, when I see those glorious pictures of Franz Hals', in the gallery at Haarlem, how exactly he hit off one of the traits of his fellow-countrymen by his almost invariable introduction of some delicious morsels of food into his pictures. Certainly the inner man was well looked after by these collegiums, and it led to the inevitable result of attracting all manner of ne'er-do-weels, who came solely to partake of, under the guise of would-be purchasers, the good things provided. The crash came somewhat unexpectedly in the February of 1637, and it was in all probability hastened by the part these impostors took in inflating still more the already high prices, although before this date some few of the longer-headed ones had made stipulations in their bargains to protect themselves should there be a fall in prices. Once the bubble was pricked, events moved quickly, and with certain regulations promulgated by the States of Holland and West Friesland in the April of the same year, which defined the terms on which all contracts were to be executed, and with the finding of a Commission in the May following, the famous mania-time came to an end. JOSEPH JACOB.

[Owing to a telegraphic error the name of Tulip Admiral van der Eyck was wrongly spelt on page 615 last week.—Ed.]

WINTER WORK ON LAWN.

WHEN lawns are in need of attention it is a good plan to set about the necessary work as soon as possible after the cessation of mowing in autumn, for although it is possible to proceed with certain kinds of work until the middle or end of March, the earlier it is done the better. The lifting and relaying of turf may be done at any time when the weather is open, between late autumn and early spring, but if the ground to be relaid is to be used for tennis, croquet or cricket the earlier date should

the ground be poor, advantage may be taken of the opportunity to dig well-rotted manure into the soil, for it is an advantage to get the manure below the turf whenever possible rather than apply it as a top-dressing. Poor, weak turf may sometimes be wonderfully improved by being lifted, the ground manured and dug over and the turf relaid. One thing must be considered, however, when this is practised, viz., that the ground be thoroughly trodden before the turf is relaid, otherwise during the following year, after a machine or roller has been passed over it a few times, small depressions will appear,

which are due to uneven sinkage. Even in old lawns small hollows occasionally occur, particularly if trees have occupied the ground at any previous time. These small depressions have a disfiguring effect, for although a lawn with naturally undulating turf, following the general contour of the neighbouring land, is quite as beautiful as a perfectly level lawn, and even better suited to some gardens, it is a very different matter to a lawn spotted with tiny hillocks and depressions. In the event of such a lawn being in a very bad state, the most satisfactory result is gained by lifting the whole of the turf, forking over the ground, manuring if necessary, and relaying the turf after the ground has been properly levelled. But if the holes are few in number it is better to remove the turf from those regions, add the necessary amount of soil and relay the turf. In carrying out such work it is sometimes a workable plan to reduce hillocks and fill up holes with the soil so obtained, thus effecting a saving of labour and cartage.

People are often troubled with weeds in lawns, and during winter they wish to do something to improve the general condition of the grass for the following year. For the smaller weeds and moss the great point is to encourage the grass by every possible means. As a rule the weeds gradually gain the upper hand when the soil begins to fail, therefore steps must be taken to enrich the soil before it will be possible to cope with the weeds. True, it is possible to kill a certain number of the weeds by applying lawn sand, but no permanent good will be done until the ground is enriched and made more suitable for the grass than for the weeds. To set to and clear even an acre of lawn from such a weed as the



TULIPS OF THE MANIA TIME. THE BULBS OF THESE VARIETIES WERE WORTH MUCH MORE THAN THEIR WEIGHT IN GOLD.

be selected. At the same time any necessary repairs should be done to playing areas or to portions of lawns which may have become badly worn during summer.

Ordinary lawns which are not subjected to heavy wear may have weak places renovated by pricking the turf over with a fork and inserting a little seed during September, but turf which is subjected to hard wear requires something further. Any part where the grass is weak should be lifted, the ground forked over and levelled and new turf laid. Should

Daisy, either by lawn sand or by hand-weeding, is an expensive and almost hopeless task without the grass is encouraged, for if 10,000 weeds are removed one winter the same number may appear the following spring from seeds lying dormant in the earth. The same remarks apply to moss, for many days may be spent raking the moss out with an iron-toothed rake—the means usually adopted—but if something further is not done the results will be unsatisfactory. One of the best dressings that can be applied to

lawns on poor soil is good loamy soil free from weed seeds. If applied early in the winter, a depth of quite 2 inches may be spread over the turf, but steps must be taken to stir it about frequently, otherwise it will become caked, and the grass will suffer. A chain harrow passed over the surface on a dry day is usually all that is needed, or, on a small lawn, the work may be done with a strong iron rake. Anyone who has not applied such a dressing will be surprised to find how soon the soil disappears among the grass. Quite as good a dressing as soil is furnished by mud taken from a lake, pond or ditch. This should be left in a low heap for a few weeks to dry somewhat, and then be spread over the grass. Until dry enough for the harrow it may be stirred occasionally with forks. Like soil, it soon disappears. Well-decayed farmyard manure is also a good dressing, while the screened residue of garden fires may be applied with advantage. Ground which is deficient in lime may be made more suitable for grass by the addition of lime, while a sowing of bone-meal is also a good thing. Bone-meal, basic slag and other manures of a like nature are more suitable for grass which is fairly free from weeds than for very weedy ground. Basic slag, it must be remembered, gives better results the second summer after sowing than the first; therefore it is a good plan to make a light sowing in spring, say, about seven pounds or eight pounds to the square rod after the application of soil or manure during autumn or winter. Spent hops and soot are good subjects to apply in wet weather in spring, for they act quickly, and give the grass a little extra fillip at a necessary time.

Coarse weeds, such as Plantains and Dandelions, cannot be outgrown in the same way as smaller-growing kinds, therefore the best way of dealing with them is to pull them up, taking care to extract the whole of the rootstock. Cutting off is of little use, for dormant buds start into growth, and in a short time the plants are as vigorous as ever. In the same way applications of salt to the crowns are not always effective, for unless the rootstock is killed new growths are sure to appear sooner or later. The extraction of such weeds leaves a considerable number of holes in the grass, which should be filled in with soil free from the seeds of weeds.

The spread of weeds in lawns is assisted to some extent by mowing without collecting-boxes on the machines. Where the grass on lawns is of a coarse character an occasional dressing of sea sand should be given. This encourages the finer grasses, which in time take the place of the stronger ones. When a dressing has practically disappeared the lawn should be raked over for the purpose of removing stones and other rubbish, after which it should be brushed with a good besom and well rolled.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Chrysanthemum Miss A. Brooker.—A decorative Japanese variety with somewhat incurving florets and of rich chestnut crimson colouring. The habit is erect and good. Messrs. James Veitch and Sons, Limited, showed pot-grown examples not more than 3 feet high, Messrs. Wells, Limited, Merstham, having a handsome vase of blooms. A useful addition.

Chrysanthemum Eric Wild.—This is virtually a pink-coloured *Mensa*, and we are of the opinion that no higher tribute could be paid to a single-flowered variety.



PRUNUS MIQUELIANA, A NEW HARDY WINTER-FLOWERING SHRUB.
(About two-thirds natural size.)

Chrysanthemum Mrs. Wingfield Miller.—A single-flowered variety. The colour is rose pink, the broad ring of white at the base of the florets rendering it distinct and attractive. These were from Messrs. Wells, Limited, Merstham.

Prunus miqueliana.—There would appear some doubt as to the authenticity of the name here given, and which for the moment is attached to one of the most elegant and captivating of the winter-flowering members of this beautiful race of plants. The plant assumes a twiggy bush or tree, the branches studded with two to three flowered clusters of starry white blossoms, arranged barely an inch apart on elegant leafless sprays. At maturity the filaments assume a reddish carmine tone,

which enhances the value of the plant (see illustration). It is said to be capable of enduring with impunity several degrees of frost later, when in full flower. From Colonel Stephenson R. Clarke, C.B., Borde Hill, Cuckfield, Sussex.

Asplenium divaricatum elegans.—A plant capable of much useful service from the market-grower's and decorator's point of view. It has more finely-divided fronds than *A. bulbiferum*, and is of more erect carriage. A graceful and beautiful plant. From Messrs. J. J. Parker and Co., Whetstone.

Carnation Mrs. A. F. Dutton.—A pretty and attractive variety, said to be a sport from *White Perfection*, though as shown it is certainly much larger. The predominating colour shade is apple blossom pink, rosy and warm at first, and, paling later at the edges of the petals, is effective and pleasing withal. From Mr. A. F. Dutton, Iver, Bucks.

Carnation Bonfire.—An American-raised variety of medium size, and of a colour shade that is all aflame in the sunlight. Mingling with the crimson-scarlet pervading the flower as a whole, there is seen a touch of ruby crimson, which, while distinguishing it from all other reds, endows it with fire and life. From Messrs. William Wells, Limited, Merstham, Surrey.

NEW ORCHIDS.

First-class certificates were awarded to *Laelio-Cattleya Golden Oriole Ruby*, shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.; and *Odontioda Latona Fowler's variety*, shown by J. Garney Fowler, Esq.

Awards of merit were granted to *Cypripedium Viking*, from Lieutenant-Colonel Sir George Holford; *Sophrö-Laelio-Cattleya Carna*, from Messrs. Charlesworth and Co.; and *Cypripedium Eurybiades*, from Sir Trevor Lawrence, Bart., K.C.V.O. A grand specimen of *Sigmatostalix radicans*, also shown by Sir Trevor Lawrence, secured a cultural commendation.

NEW FRUITS.

Apple Steyne Seedling.—A capital late dessert variety of fine

flavour and colour, resembling a large fruit of Cox's Orange Pippin. Shown by Lady Thornycroft, Isle of Wight.

Apple Crawley Beauty.—A late culinary Apple of unknown parentage but of excellent quality. We are informed that this is a noted local variety found in cottagers' gardens in the neighbourhood of Crawley. Shown by Messrs. Cheal and Son, Crawley, Sussex.

Apple Winter Banana.—A Canadian variety shown by the Government of British Columbia. The flesh is firm, juicy and of far superior flavour to the general run of Canadian Apples.

GARDENING FOR BEGINNERS.

THE LEATHER JACKET AND ITS ERADICATION.

THE daddy-long-legs, or the crane-fly, as it is variously called, in allusion to the length and slenderness of its six legs, is an insect known to everyone. It is numerous enough almost everywhere to call attention to itself during the summer and early autumn months, flying over grasslands or sheltering in sheds or rooms in wet

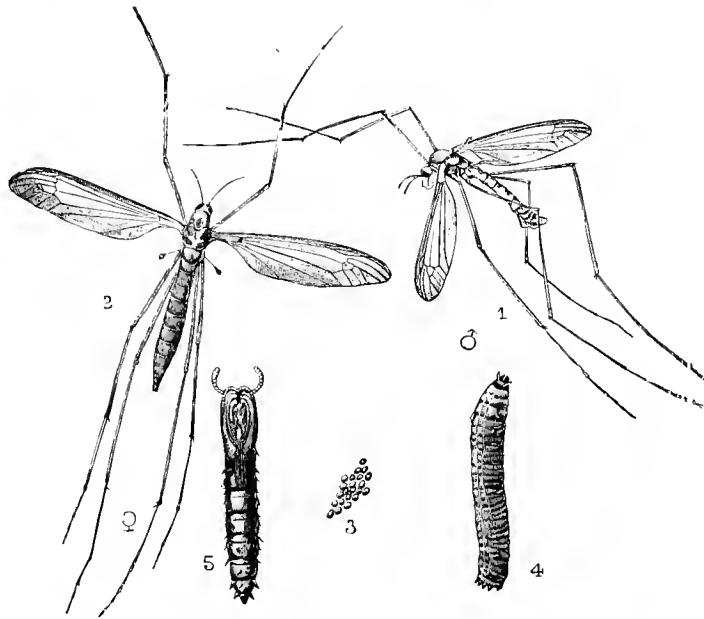
chrysalids being easily recognisable from their elongated form and curious projecting spikes (Fig. 5). From these the perfect fly (Figs. 1 and 2) emerges in summer.

One noticeable peculiarity in their habits is their liking for damp places. This suggests the desirability of careful and thorough drainage. Their ravages are very rarely experienced in well-drained situations, especially if there is no tendency to acidity through insufficiency of lime in the soil. Birds of many kinds feed upon them, and the numbers consumed by thrushes, starlings, lapwings, rooks and gulls are enormous.

Nothing that can be added to the soil can be said to kill them without fail, though probably dressings of substances containing naphthalene do a good deal towards clearing them away, and, if it could be applied cheaply, carbon bisulphide would be an excellent remedy. Efforts have, however, to be directed mainly towards prevention, and the encouragement of insectivorous birds and attention to drainage are important points in this direction. The cleaner

unforeseen that often happens, and from one packet of seed a variety of colours, both in single and double flowers, may be obtained, even though the seed may have been collected from one plant only. It is however advisable to procure seed from a reliable source, for by this means only is one likely to obtain a good strain of seedlings. Single varieties are, as a rule, useless, and should be discarded; but double varieties, if worthy, may be perpetuated by layering or from cuttings and pipings. There is a common failing among double-flowered seedlings, viz., a split calyx, owing to the number of petals being too great for the green calyx tube, with the result that the latter bursts and the flowers present a very untidy appearance.

It is usual to sow seed, say, in late March or April, and these notes serve to remind one in good time for the work to come. The seed should be sown under glass, preferably in a warm greenhouse, using well-drained pans and a compost of sandy loam and sifted leaf-soil for the purpose. The pans should be finished off with a level surface of finely-sifted sandy soil, and the seed just covered with silver sand. It is well to place a piece of glass over the seed-pan to keep a uniformly moist temperature, and under these conditions germination will take place in a week or a fortnight. As soon as germination has taken place, the glass should be removed, keeping the seedlings in an airy place and as near to the glass roof as one reasonably can. When large enough to be handled, and after being well hardened off, the seedlings will be ready to plant in open beds, and if the beds have been enriched with fresh loam, decayed manure and lime rubble, so much the better. By the end of September the seedlings may be transferred to their permanent quarters in beds or borders, and here they may remain until the following year, at which time they can be depended upon to reveal their secret forms and colours.



1, MALE DADDY-LONG-LEGS; 2, FEMALE DADDY-LONG-LEGS; 3, EGGS; 4, GRUB; 5, CHRYSALIDS.

weather. There are several species known in Britain, and their various times of hatching-out prolong the season over which the insects are on the wing. *Tipula oleracea* is about in May and June, *T. paludosa* in August and September, and these are the two common species. The flies themselves do no direct harm, and they form an eagerly-sought food of many birds, such as starlings and thrushes, which may often be seen snapping them up while flying over the rough herbage of a headland, or about a hedge or over a lawn.

The flies lay a considerable number of blackish eggs, nearly always among rough grass and weeds, though apparently sometimes among cultivated plants. The eggs hatch within a fortnight or three weeks, and give rise to the grub called the leather jacket. Occasionally leather jackets are confused with surface caterpillars or with wireworms, from both of which they differ in the absence of feet. Fig. 4 shows their shape and size when full grown. The mouth is at the pointed end, and at the blunt tail end are a number of curious processes, and these characters help to distinguish them from other soil grubs. In colour they are a dark grey, sometimes almost black, and have a rather tough skin, from which their common name has been derived. They feed on the roots of grasses and various plants, such as Carnations, Strawberries and so on in the garden, within a few inches of the surface, going deeper in cold weather. When full fed they become chrysalids of the same dark tint in the soil, the

the cultivation, too, especially about those too frequently neglected corners of gardens, hedge banks and the like, will help to keep the flies from laying their eggs, and, where it can be used, a heavy roller will crush numbers of the flies when they are hiding in rough herbage and in long grass.

SCIENTIST.

CARNATIONS FROM SEED.

THE raising of Carnations from seed is a delightful and fascinating pastime, owing to the fact that one is never quite sure what the results will be. There is a glorious uncertainty about the operation, and one may become possessed of varieties of hitherto unknown colours. It is the



A VASE OF SEEDLING CARNATIONS GROWN BY AN AMATEUR.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Bulbs and Tubers in Store.—Time may profitably be spent at this season of the year in occasionally examining the various subjects that are resting, such as Dahlias, Begonias and Gladioli. A dry, cool place is required, and should any of the bulbs be decaying, remove them at once. If taken in time, decay may be arrested by cutting away the diseased part and dusting powdered charcoal on to the clean-cut portion.

Preparation of the Ground.—As with all other departments of gardening, there is nothing like a good start, and it is at this season, when work is slack, that attention may be directed towards the improvement of the soil and obtaining a greater depth of good soil, so that the plants are better able to withstand a period of drought. The positions for Sweet Peas and Dahlias, to mention two commonplace subjects, should be well prepared, have plenty of manure added, and the surface of the ground be left rough. If the soil is deficient in lime, give the surface a good sprinkling and apply any burnt garden refuse.

Tritomas or Kniphofias.—These are none too hardy in many places, but are worth a little care and attention to preserve them through the winter months. The plants will benefit by a good covering of a loose material, such as flaky leaf-mould or short strawy litter, and, in the event of extra sharp weather, a further covering of Bracken may be given them.

The Rock Garden.

Gentiana acaulis.—We have just replanted two beds of this subject, which has occupied the same position for a number of years on either side of a garden walk. The old soil, which had become impoverished, was taken out to a depth of 18 inches, some rough drainage placed at the bottom and new rooting material afforded, and the old clumps divided up and replanted, making them very firm.

The Shrubbery.

Early-flowering Shrubs.—Those that brave the elements in the New Year are particularly welcome, and when planting in the mixed shrubberies the selection should include some that flower at that season in some form. Quite one of the most interesting, and easily trained to a support, is *Jasminum nudiflorum*. *Lonicera Standishii* is commencing to open its pretty flowers at the time of writing, and will continue to bloom till quite the end of January. *Hamamelis mollis* is in flower about Christmas, and continues fresh throughout January. *Prunus davidiana* and *P. d. alba* commence about the end of the first month. *Daphne Mezereum* and the white form bloom during January and February. Then towards the end of February or early in March that small tree or bush, *Parrotia persica*, begins to unfurl its quaint flowers. *Ribes laurifolium* is new, but will make a grand early-flowering subject for the rockery, being absolutely hardy and unlike any of the others. *Chimonanthus fragrans* (the Winter Sweet) succeeds best on a warm wall, where it will fruit freely as well, and in such a position is often in bloom by the end of January, though it is also hardy here as a bush. During March the *Corylopsis*, *Cornus mas*, with its varieties, with additional charms by reason of their variegated foliage; *Ribes sanguineum* and varieties *carneum* and *atrosanguineum*, the well-known Flowering Currants, *Cydonias*, and the many *Prunuses*, including *Pissardi* and the varieties of *persica*, and the Almonds, *Spiræa Thunbergii* and *Forsythias* will all be in flower.

Plants Under Glass.

Plants in Rooms.—Especially at this season of the year, when thoroughly well warmed at night and probably the windows thrown wide open early in the morning, decorative subjects, even if well hardened, are apt to suffer. Before taking them indoors, especially if from a warm house, they ought to be transferred to a cool one first for twenty-four hours, and the foliage plants be frequently changed.

Ficus repens.—This is a splendid subject for covering the walls of houses, thriving in almost any site and clinging very closely to the walls. It has a neat appearance and, when kept syringed, grows freely.

Stag's-Horn Fern.—On such a background as a greenhouse wall *Platycteriums* look most attractive and seem to thrive. The best way of establishing them is to make a pocket of virgin Cork, securing it firmly to the wall by means of wire. Then fill up with a mixture containing plenty of rough peat. If the plant does well it will eventually support itself.

Fruits Under Glass.

Suckers in Peach Trees.—These are often a continual nuisance and make the house appear very untidy. While the trees are dormant and when attention is being given to the borders, trace the suckers down as far as possible to their origin and cut them off. To keep pulling them when green only causes them to come thicker again. Damaged roots are the cause of them, and the importance of cutting away any roots that are bruised from the under side cannot be over-estimated.

Pot Strawberries.—If the plants in pots for forcing are well plunged in leaves or ashes so that the pots are secure, they will take but little harm. They are best protected from heavy rains, however, and should exceptionally cold weather prevail, add further protection.

The Kitchen Garden.

Chicory.—The roots of this salad may now be forced with the greatest of ease where a warm place is available.

Asparagus.—Where good strong crowns are available, this may now be forced on mild hotbeds or in a warm structure with bottom heat. But in cold frames on a hotbed excellent produce may be obtained. Place the roots thickly on a little soil, just cover them, and keep as near to the glass as possible. Place a lining of warm strawy litter round the frame.

Broccoli.—Look through these and make the curds quite safe from frost by bending down the leaves over them, and when large enough, transfer to a safe place.

Late Turnips.—Mould a little soil up round the roots of these. Such plants will probably give a few good dishes of greens later on.

The Hardy Fruit Garden.

Fruit Trees on Walls.—When fruit trees have been nailed to walls for a number of years, the face of the walls becomes much knocked about and makes a splendid harbour for insect pests. The trees will benefit by being taken down and well cleansed, loosely tied up, and the walls well dressed as well with a strong insecticide, taking care that too much does not reach the roots. The use of strained wires on walls has much to recommend it. Where shreds are employed for nailing, I would recommend the use of those known as Dean's Medicated, as they are both durable and distasteful to insects. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Iris susiana.—Though quite hardy, it does not harm, but rather benefits the plants to place some rotted manure among the pushing shoots. It is remarkable how, as November returns, the new growths begin to push up from the ground, but it is no doubt during the early spring months that the flowering growths for another year are produced.

Schizostylis.—This Cape plant is doubly gay, owing to the absence of floral competitors. Unfortunately, it is not quite hardy in the North, and in cold localities it is worth lifting and preserving over the winter in a frost-proof building. It succeeds well here on a dry, warm position, and also in the rock garden.

Red Valerian.—This "weed," of which there are some desirable colour variations, is another satisfactory plant for blooming into the winter. It must be provided with a dry soil and warm position to get it in flower so late, and the plant be cut over in summer. It is also suitable for wall culture.

Pampas Grass.—Two months ago it seemed as if this handsome Grass would fail to flower. At the time of writing, however, the clumps are well supplied with plumes. For the sake of these some people strip the plants as soon as the plumes

are fit to cut, which seems a wasteful thing to do. Where frosts are known to be intense, mats or other protecting material should be held in readiness to cover the plants. Here they are often frosted, but always make good the next season's growth, though unprotected in winter.

Shrubs.

Romneya Coulteri.—Still producing its paper-like blooms, this also should be protected during severe frost, for though the current year's shoots may be, and often are, destroyed, the base of the plants may be preserved, provided a dry soil is chosen and protection given.

Lonicera Standishii.—This is now in flower and will continue producing blooms for many months. It is grown on south walls here and varies considerably in the time of flowering, according to position. On a terrace wall it never flowers till spring. The same thing occurs with

Jasminum nudiflorum, which is now flowering in some positions, the buds not being formed on plants in less exciting situations. This is an invaluable plant for the gardener, the long flowering sprays, whether in bud or flower, being always acceptable for vase-filling. The shoots strike root as freely as a Gooseberry, and soon grow into sizeable plants, either for wall-covering or for bushes.

China Roses.—Large unpruned bushes almost every year produce quantities of their lovely pink blooms even into the winter. Our latest and best are produced in a position shaded by large Laurels, and one that no one would for choice choose for Roses. Unfortunately, the vicissitudes of seasons have left nothing but the stock of some. It is worth noting that it is not wise to plant budded Roses for ordinary purposes. Most of them root with facility from cuttings and, if planted deep enough, the frost that will kill such things must be severe indeed.

The Plant-Houses.

Salvia splendens.—Once these are past their best, they are not worth preserving, but should be thrown out, keeping only enough to provide cuttings for another season's supply.

Marigolds.—Those who have not seen these in the dark time of the year would be surprised to see how brave they look as pot plants. Their great foe is mildew, and they flower all the better for being rather under-fed and under-watered. Besides the beauty of the flowers there is always that spicy scent, of which many people are fond—so fond that at one time the blooms were eaten.

Chrysanthemums.—These are much later than usual, which is a condition that is very welcome, as it means a nice lot of bloom well through January. The late plants must, however, be very carefully dealt with, over-feeding and over-watering spoiling the blooms for cutting, and mildew is always a danger to be reckoned with. Cuttings are now ready, but for ordinary purposes it is doubtful if there is any advantage in taking them before the advent of another year.

Tulips.—We look for the earliest Tulips about this time, *Proserpine* being the most reliable forcer and so much superior to the *Duc Van Thol* group that I have not grown any of these for some years past. Few plants are so little affected by bad treatment as these. It is quite usual to shake the soil from the roots and sometimes to shorten these and plant them in fancy receptacles for decorative purposes. I find they live as long as those undisturbed in any way. Heated rooms, however, quickly destroy the petals.

The Fruit-Houses.

Guavas.—These are esteemed for preserving. The plants succeed very well on the back wall of a late vinery, in which the fruit will ripen in September. I occasionally cut back some of the stronger shoots; this causes the production of many young and vigorous ones, which carry much finer fruits.

Cutting Grapes.—Though Grapes can be preserved well on the Vines for a long time, it is an expensive method, and no hunches need be allowed to hang any longer where there is a dry room which can be kept at an equable temperature in which to store them. It may be noted that either end of the shoot may be placed in the water when bottling them. The value of this is that in the case of *Lady Downe's*, where the bunch is sometimes quite close to the main rod, the shoot can be cut close to the bunch and the part beyond it placed in water.

R. P. BROTHERSTON.

Tynninghame, Prestonkirke, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ROSES AND LAVENDER (Grafton).—We fear the width of the border will preclude the carrying out of the suggestion to which you refer, unless the Lavender bushes were planted as a bordering and trained outwards on the path, should such exist. In so small a compass there would be no better way than arranging the Roses alternately for the present, about two feet apart longitudinally, and not more than 18 inches asunder anglewise. If this were done, the Lavender bushes could be arranged rather closely to form a bordering, though it might be necessary to prune them from time to time to keep them within bounds. Should a grass verge exist at the margin, the planting of the Lavender would be impracticable. In that case we would suggest a bordering of Tufted Pansy Bullion or Florizel.

PLANTS FOR BORDER (G. B.).—If you wish for a border of summer flowers, you could hardly have in the space you name a more effective one than that made by Antirrhinums (Snapdragons), which, in Tom Thumb, intermediate and tall varieties, would make a grand show. The plants range from 6 inches to 3 feet high, and give shades of yellow, pink, crimson and orange in each section. These plants could be raised from seeds sown in January or February in slight heat under glass, and potted on and planted out in early April should do quite well. By employing two colours of each section, a great bank of blossoms would be formed. Snapdragons do not require a very rich soil, but it should be deeply tilled, notwithstanding. For flowering during late summer and early autumn, you might, with generous cultivation of the soil, plant Phloxes, Pentstemons—these to be raised from seed like the Snapdragon—Italian Starworts, Carnations, Michaelmas Daisies and the like. Again, seeing that you have Roses at the back, why not plant the border with dwarf Roses, and, if needs be, carpet the soil with Tufted Pansies? In our opinion, however, either the Pentstemons or the Antirrhinums would make the best show at the smallest cost, and, with a little intelligent care, are easily cultivated.

TREES AND SHRUBS.

REMARKABLE WILLOW TWIGS (R. G. J. R.).—The curious Willow growths sent for examination are flower catkins which have developed abnormally. It is difficult to say what may be the cause of the condition, but it probably originated through the puncture of insects or some other small injury. While such abnormal growths are not common, they are sent for examination two or three times a year, as a rule. A parallel case, but on a larger scale, is the formation of the large, curiously contorted masses of branches found on Birch and other trees, which are familiarly spoken of as "Witches' Brooms."

HEDGE OF CUPRESSUS LAWSONIANA (L. G. F.).—As your hedge has only been planted about a year, there is no immediate necessity for cutting the plants into shape, and you would be well advised to leave the work alone till next April. If you do the pruning now, no new growth will take place until next year, and the clipped plants will look ugly all the winter. By pruning in April, however, new shoots will appear almost at once. It is only by repeated pruning and care that you can keep the top horizontal and the sides vertical, and it will probably take you several years to obtain this condition. A gauge could be used for the sides and top, but it is probable that you will be able to work quite as well by the eye. Do not clip with shears, but use a knife or secateurs.

SHRUBS FOR SHADY PLACES (L. B. W.).—The following subjects are likely to prove satisfactory: Arbutus Unedo, Rhododendrons and Azaleas in variety, Berberis stenophylla, B. Darwinii, Hydrangea Hortensia, Spiraea arifolia, S. arguta, Potentilla fruticosa, Escallonia macrantha, E. philippiana, E. lanylevansii, Cotoneaster frigidus, C. buxifolia, and common Holly. It depends entirely upon the object for which the Spiraea is required as to whether S. arifolia (correctly S. discolor) or S. arguta is chosen. The former grows 10 feet high and blooms in July; the latter grows 5 feet high and blooms in April. Both are excellent shrubs. If you wish for a

shrub with a long period of beauty, a group of the golden-leaved Cornus Spæthii would be a good shrub to plant.

SHRUBS FOR BORDERING A PATH (J. T. O.).—The following shrubs will be likely to suit your purpose. All are easily grown if given good loamy soil which has been well worked, and all flower freely. Olearia Haastii, a compact-growing evergreen 3 feet to 3½ feet high, with small leaves and bearing white flowers freely in July and August. Berberis Darwinii, a bush 4 feet to 6 feet high (can, however, be kept any height by pruning), with small evergreen leaves and orange-coloured flowers in April. Choisya ternata, an evergreen bush up to 8 feet high and kept to 3 feet or 4 feet by pruning, flowers white, fragrant, produced in May. Philadelphus Lemoinei, deciduous, 3 feet high, flowers white, fragrant, borne in June. Diervilla Eva Rathke, 3 feet to 4 feet, deciduous, crimson flowers, borne from May to August. Syringa persica, a small-growing Lilac, 2 feet to 4 feet high, flowers lilac, fragrant, produced in May. It is probable that Kalmia latifolia would not succeed with you. When at its best there are few more beautiful objects, but unfortunately it is fastidious as to its surroundings, and for one place where it grows well there are fifty places where it is not a success. The plants mentioned above are all likely to grow well in ground which would suit an Apple tree or Gooseberry bush.

THE GREENHOUSE.

CLIVIA FAILING (Mrs. A.).—The reason of your Clivia behaving in the way it does is that the plant is subjected to too low a temperature and too great an amount of atmospheric moisture. The condition of the roots, too, may be at fault, and this would tend to make matters worse. If the roots are not healthy, the plant should be repotted next spring, immediately after the flowers are past, using for the purpose a compost mainly made up of good loam, lightened by a little leaf-mould, small nodules of charcoal and silver sand. Clivias are seen at their best when they are kept in a light, buoyant atmosphere, and in a structure where a minimum temperature of 45° is maintained.

PELARGONIUM LEAVES FOR INSPECTION (E. S. S.).—The leaves sent show marked traces of having been attacked by aphides or green fly, and these pests are, no doubt, the primary cause of the trouble. The injury was, in all probability, caused when the leaves were still young, and, as they developed, the punctures made by these insects become larger. Another point borne out by the appearance of the leaves is that the plants have apparently been kept too close and in too moist an atmosphere, for a free circulation of air is very necessary for the successful cultivation of Pelargoniums. We should not advise you to do away with the plants, as we consider that, by keeping them clear of insect pests and allowing them plenty of air, the trouble will be cured.

CHRYSANTHEMUM: YELLOW SPORT (W. F. H.).—From what you tell us of the yellow Japanese Chrysanthemum bloom sent to us for information, we should regard this as a root sport from the white sort named Miss Maud Jefferies. It is not at all an uncommon freak on the part of Chrysanthemums to sport in this manner, and we are very much disposed to think you will have no difficulty in perpetuating it. To make assurance doubly sure, embed the stems of some of the plants in light soil on the greenhouse bench, and propagate the shoots that are evolved. Also propagate the basal shoots from other plants having yellow flowers, and next year will prove, by its results, that you will have certainly fixed this sport in some instances, if not in every one.

PLANTS FOR A GREENHOUSE (J. T. H.).—The back wall should do for Roses; but, even then, so much depends upon circumstances, of which we have no knowledge. In all cases, five minutes on the spot with a practical man will be of more service than any advice we can give without knowing more particulars. If you grow Roses, it will be very essential to keep them absolutely clear of green fly, as these soon cause a great deal of damage. You mention that there are plenty of shelves, and such being the case, they could be utilised for flowering plants of various kinds during the summer and for bulbs in the spring. Again, you might, in the winter, force Rhubarb and Seakale therein, while an early crop of Dwarf Beans would supply something for the table. One good piece of advice is, do not aim at too many different things in the same house, as various plants require varied treatment.

CACTI (X. G. H.).—Many of the Cacti are adapted for growing in a living-room in London, as the dry atmosphere, the bane of most indoor plants, does not affect them to anything like the same degree as it does most classes of plants. A good light position is essential, and the more direct sunshine they get, the better they will, as a rule, flower. The most suitable potting compost for Cacti consists mainly of good loam, lightened by an admixture of brick rubble, broken small, and silver sand. From September to March watering should be sparingly done. At other seasons the soil may be kept moister, but stagnant water must never be allowed. In making a selection of the best for window culture, the Phyllocacti form quite a race by themselves, being of fairly tall growth, with large, gorgeous flowers borne during the summer months. Some members of this section are occasionally to be seen in cottage windows, as is also the Rat's-tail Cactus (Cereus flagelliformis), with long, pendulous growths studded with rose-coloured blossoms. Many of the smaller Cacti, such as the different Mammillarias, Echinocactus and Echinocereus, are of strange appearance, and will flower under favourable conditions.

ROSE GARDEN.

THE SEVEN SISTERS ROSE (A. R. B.).—There is confusion as regards the correct name of this Rose. Some think it is the De la Grifferaie, one of the multifloras, and now used as stock; but its flowers are pink. Others believe it is the Félicité Perpétue, and we believe the latter is the correct variety.

ROSES AND COLD GREENHOUSE (A. G.).—You can most certainly grow good roses in your cold greenhouse. You have a good border of rotted turf and horse-mannure, and we should advise you to trench this over and work some basic slag into the lower soil at the rate of 8oz. to a square yard. If you could deepen the border to 3 feet it would be all the better, looking to the future needs of the Roses. As you plant, give each bush a handful of bone-flour, scattered just beneath the surface soil and well distributed. Procure plants from the open ground—good bushy stuff on the Briar; and you could have one or two standards if you cared to do so, also one or two to train as columnar or pillar Roses.

FRUIT GARDEN.

YOUNG MAY DUKE CHERRY TREE (J. M.).—Could you not make a rough-and-ready provision for protecting the blossom next spring by making a framework round the tree of rough poles, on which the protecting material could rest? Old sheets, mats or tiffany of any sort would do, covering the tree over every night when frost is apprehended, and taking them off in the daytime, doing this till danger of frost had passed.

SPRAYING APPLE TREES (L. J.).—Spores of Fusidium dentriticum are about and active from March to October, perhaps longer. The affected shoots are best pruned off in the winter, but in case any are left, the spraying with copper sulphate (1lb. to twenty-five gallons of water) is resorted to in February. The spraying with Bordeaux mixture is to prevent the growth of spores on new leaves and fruits, and as these are active during the whole growing season (but most in the early part), spraying with Bordeaux mixture must be done at intervals.

DAMAGE TO APPLE TREES (J. R.).—The damage done to the foliage and the failure of the Apples to ripen are due to some extent to the adverse weather at about the time the Apple buds began to burst, and largely, as you suggest, to the attack by aphids. If an attack is likely to occur in spring it is easy to foretell it, for careful examination of the shoots during the winter will reveal the black, shiny eggs of the insects on the young shoots. Spraying with a caustic wash at about the end of February will lessen the number of those that hatch, and then spraying with Quassia and soft soap as soon as hatching occurs will check the trouble another year, so that an attack need not be feared, as it will not come until winter forms occur, and not before the middle or end of May, when the trees will be better able to withstand an attack.

PEAR LEAVES FOR INSPECTION (J. E. W.).—The insect that attacked the Pear leaves and devoured their upper surfaces is known as the Pear slug, and is the larva of the Pear and Cherry sawfly. It is black during a part of its life and has a slimy skin, and this has earned for it the name of slug; but, like most other true insects, and unlike the slug, it becomes a chrysalis, dropping to the earth and burying itself for the purpose. It hibernates in this form during the winter, and the perfect four-winged fly emerges in summer. The best method of dealing with it is to spray with lead arsenate, or to dust the leaves with lime on two occasions at intervals of two days. The latter measure has the effect of causing the larva to shed its skin twice in such rapid succession that the effort destroys it.

KITCHEN GARDEN.

INJURY TO CELERY (Mrs. A.).—The cause of your Celery being blighted is that the plants are very badly attacked by the Celery fly—to such an extent, indeed, that they are absolutely spoilt. The fly is but a small one, which deposits its egg on the leaves. After a short time these eggs hatch into tiny maggots, which commence to eat the chlorophyll, or green matter, of the leaves, thus greatly weakening the plants. When the evil is first noticed, these little white maggots may be seen carrying on their work of destruction between the two surfaces of the leaves. If few in number, they can then be killed by a nip between the finger and the thumb; but in the case of a bad attack this is, of course, impossible. The main point is to keep the fly from depositing its eggs on the plants, for which purpose soot or lime may be sprinkled on the leaves while they are damp. The two ingredients should not be mixed, the soot being more generally preferred.

MISCELLANEOUS.

WINTER TREATMENT OF LAWN (Mrs. Nains).—You will find this subject fully dealt with on page 627 of this issue.

ABNORMAL ANTIRRHINUM (W. R. Ward-Jackson).—The Antirrhinum sent is certainly an extremely curious one—more curious than beautiful. The inflorescences had developed in the normal way so far as bearing numerous lateral buds was concerned, but there they had failed. The flowers had not become green, as in so many instances, but instead of petals and so on, short leafy shoots had been developed, the leaves being very small compared with the normal ones. This kind of thing—replacement of flowers by leafy shoots—is sometimes due to external conditions, but if it were so in the present case, it is difficult

to see why other neighbouring plants were not also affected. It would rather appear that for some unknown reason the seedling had been born with this peculiarity innate. It would be extremely interesting to see whether the plant behaves similarly next year, or whether cuttings from it do so.

NAMES OF FRUIT.—W. F. N. C., Southampton.—Apple Royal Nonsuch and Pear Marie Louise.

NAMES OF PLANTS.—Regular Reader.—See next week's issue.—*Veronica*.—Small specimen, *Viburnum Tinus* (Laurustinus); large specimen, *V. T. lucidum*; *Veronica speciosa* hybrid, probably a little tender on the East Coast.—C. W., Sunderland.—1, *Linaria Cymbalaria*; 2, *Sedum sarmentosum variegatum*.

SOCIETIES.

THE PERPETUAL CARNATION SOCIETY.

The winter show of this society was held in the Royal Horticultural Hall on Wednesday, December 4, the non-competitive exhibits having been staged on the day previous in conjunction with the Royal Horticultural Society's meeting. That the society is making progress is fully evidenced by the excellent display of Carnations, making quite the best exhibition yet held by the society. There was a good attendance of visitors present during the day, and quite a keen competition in many classes.

OPEN SECTION.

One of the most attractive classes was that consisting of a table of cut Carnations arranged on a space 10 feet by 3 feet, with foliage, arranged for decorative effect. Mr. C. Engelmann, Saffron Walden, secured leading honours with a very handsome display, which included *Lady Northcliffe*, *Sunstar*, *Carola* and *Pink Delight*, in excellent condition. Messrs. W. Wells and Co., Merstham, obtained second prize with a bright and well-finished stand, having *Dorothy Gordon* and others in good form. Colonel Rideout, Langley, Bucks, came third.

The American Challenge Cup was won by Mr. H. T. Mason, Church Farm Nursery, Hampton, with three grand vases of *White Wonder*, *Dorothy Gordon* and *Gloriosa*, Mr. W. E. Wallace being second and Mr. C. Engelmann third.

Mr. C. Engelmann obtained the Bruton Cup for English novelties, showing *Sunstar*, *Lady Northcliffe* and *Carola*, of splendid form and colour.

Mr. E. Guile, Shortgrove Gardens, Newport, Essex, secured the highest place in the class for twenty-five blooms of *Eochantress* colour with the variety *Lady Meyer*, which also received the silver-gilt medal offered as special prize in the open classes. Mr. W. E. Wallace was second and Colonel Rideout third.

The first prize for twenty-five pink Carnations was secured by Messrs. Stuart Low and Co., Bush Hill Park, with a well-finished vase of *Baroness de Brienne*, Mr. W. E. Wallace coming second and Mr. C. Engelmann third.

Mr. W. E. Wallace achieved first place with the rose pink variety *Gloriosa*; second, Colonel Rideout.

Una Wallace was the premier deep pink shown by Mr. Wallace, Mr. Engelmann following.

The scarlet class was very brilliant in colour. Mr. Wallace taking first with *Scarlet Glow*, Mr. H. T. Mason second with *Beacon*, and Mr. H. J. Dudney of South Road, Erith, third.

Whites were also good, and Mr. H. T. Mason's *White Perfection* was a well-deserved first. Mrs. Collins, Heathfield Nursery, second, and Colonel Rideout third.

The first position in the dark crimson class was secured by Mr. W. E. Wallace with a beautiful vase of *Carola*, which was much admired. Mr. Engelmann taking second place with the same variety.

Mr. Wallace took first in the "fancies" with *Benora*, Messrs. Stuart Low and Co. second, and Colonel Rideout third.

Mikado, shown by Mr. A. F. Dutton, was placed first as being the best vase of any other self-coloured Carnation not included in the above classes. Colonel Rideout obtained second.

Mrs. A. R. Bide, Farnham, secured first prize for a well-arranged basket of Carnations and foliage.

Mr. S. F. Jackson, Danehurst, Epsom, was the successful winner with ladies' sprays, *Captain Wiener*, *Ewell Castle*, Surrey, taking first for six gentlemen's buttonholes, and Mr. W. Heath, The Hylands Gardens, Chelmsford, was placed first for a very pretty hand-basket.

AMATEUR CLASSES.

The beautiful silver-gilt challenge cup presented by Lord Howard de Walden, and offered for a semi-circular group of growing plants, was awarded to C. F. Raphael, Esq. (gardener, Mr. A. Grubb), Porters Park, Shenley, for a well-finished group, having perfect flowers in good condition and colour. Mrs. Bischoffsheim, Warren House, Stanmore, also staged a nice group, and secured second. Mrs. Adair, Adair Place, Englefield Green (gardener, Mr. W. Holder) coming third.

There were two circular tables of cut Carnations arranged for effect, which were very pretty, and the one staged by Sir Randolph L. Baker, Bart. (gardener, Mr. A. E. Usher), Ransdon, Blandford, was very tastefully done and well deserved first prize, Mr. H. Smith, Epping House, Little Berkhamsted, Herts, taking second.

There was keen competition in the table decoration. Sir Randolph Baker was first, and was very closely followed by Mrs. Adair (gardener, Mr. W. Holder).

Sir Randolph Baker took first for six Carnatio plants in bloom, which were in good condition, and Mr. W. Holder secured second.

The Burnett Challenge Cup was won by Sir Randolph Baker with twelve blooms of Burnett's novelties, while Captain Wiener secured first place for six blooms.

Messrs. Wells' gold medal was also secured by Sir Randolph Baker, followed by Lord Burnham, Beaconsfield.

The Dutton prizes, which were very attractive, were offered for twelve blooms of special varieties, the first prize being won by Sir Randolph Baker, Bart., who was followed by P. Ricardo, Esq., The Friars, Old Windsor (gardener, Mr. G. West).

Awards in the non-competitive classes were given as follows, all for Carnations: Mr. C. Engelmann, large gold medal; Messrs. Stuart Low and Co., gold medal; Mr. H. Burnett, large silver-gilt medal; Messrs. W. Lawrence and Son, silver-gilt medal; Messrs. Young and Co., silver-gilt medal; Mr. R. F. Felton, for a table of British novelties, silver-gilt medal; and silver medals to Messrs. W. Cutbush and Son, Highgate, and Mr. G. Lange, Hampton.

HORTICULTURAL CLUB.

A TOUR IN PALESTINE.

ON Tuesday, the 4th inst., after the usual monthly dinner of this club, at which Sir Harry Veitch presided and a large number of members and friends, including many ladies, were present, Mr. Arthur W. Sutton, F.L.S., gave a most interesting lecture, entitled "My Desert Camping Tour to Mount Sinai," illustrated by a hundred splendid photographs taken by him *en route*, and beautifully coloured. Mr. Sutton, who takes a particular interest in the evidence afforded in favour of the accuracy of Biblical records by the actual localities to which they refer, explained at the outset that he was heavily handicapped in this direction by the shortness of the time at his disposal and the difficulty he felt on referring to the views he displayed in not dwelling at too great a length on the many interesting points in this particular connection, which, moreover, he felt were hardly adapted to a general audience. He commenced with a map of the region which he had traversed circuitously for some two hundred miles in company with Dr. Mackinnon, the well-known medical missionary of the Edinburgh Mission in Damascus. The first visit made was to the traditional spot where the passage of the Red Sea was effected, under apparently miraculous conditions, by the Israelites. It would appear, however, that there are three places assigned to this, one of which, to the north, where the water is very narrow and shallow, is considered as the most likely, as an exceptional state of tide and wind might have greatly facilitated the passage on practically normal lines, while the other two involve the traversing of deep water and a much greater distance, which only a colossal miraculous interposition could have rendered possible. The views of the desert were splendid, apparently limitless streaks of barren sand, without a trace of vegetation, alternating with views of brilliantly green oases of Palms, sometimes, thanks to a local supply of water and the generally warm climate, of such luxuriant growth as to be traversable with difficulty. The general temperature varied, however, from 100° in the shade during the day to very near the freezing point at night. The prevailing conditions of sand and the consequent limitation to camels for transport of both travellers and their impedimenta rendered the whole journey a most fatiguing one, camel-riding being so uncomfortable as to compel frequent descents for a rest, and walking being, in its turn, equally exhausting, so that recourse to the camel's back for variety's sake involved no particular charm, and this, with short intervals of rest on the dry, heated plain, and day after day, did but little to recommend the "Promised Land" as a popular resort. In time, however, Mount Hebron and its associated hills of barren granite of brilliant red, interspersed with black and other coloured outcrops, everywhere devoid of even a blade of grass, began to indicate an approach to Mount Sinai, and here, of course, the Biblical records were brought home to the traveller most vividly by the character of the surroundings of these heights, which are regarded as the scene of the most stupendous events. The intervening stretches of sand were here dotted with small bushes, and even one minute flower was discovered by the lecturer. At Sinai there is a monastery, at which both travellers and their cook, guide and camel-drivers had a well-earned and welcome rest prior to the return journey to Suez. A very hearty vote of thanks to Mr. Sutton concluded a most interesting and instructive meeting.

SCOTTISH HORTICULTURAL ASSOCIATION.

THE monthly meeting of the Scottish Horticultural Association was held in the Hall, 5, St. Andrew Square, Edinburgh, on the evening of Tuesday, December 3. There was a satisfactory attendance, presided over by the president, Mr. W. H. Massie, of Messrs. Dicksons and Co., nurserymen. The usual routine business was considered and the nominations of office-bearers for the session of 1913 were made in accordance with the rules. Exhibits were unusually few in number, but this was compensated for by the excellent collection of single-flowered *Chrysanthemums* shown by Mr. W. G. Pirie, gardener to Charles W. Cowan, Esq., Dalhousie Castle, Midlothian. This was a most interesting and beautifully grown exhibit, showing both excellence of variety and good cultivation. There was no set paper for the evening, but the meeting was an "open" one for the discussion of various subjects. It proved an interesting arrangement, as others of the same kind have done, and good discussion arose on such ques-

tions as the effects of grass-land on the coloration of fruit, the effects of galvanised wire, judging of market Leeks, and a number of other subjects comparatively too unimportant for full treatment in a lecture, but of much importance in general practice. The discussion was taken part in by a number of the members present.

THE NEW PRESIDENT.

The new president of the association, as recommended to the annual general meeting, is Mr. David King of the Osborne Nursery, Murrayfield. Mr. King has long taken his share in the work of the association, and has attended faithfully to its interests, furthering its success in every possible way. As coventor of the finance committee he has done excellent work, and as a vice-president he has shown how capable he is of filling the post to be vacated in the usual routine by Mr. W. H. Massie, one of the many able presidents of the Scottish Horticultural Association.

BOURNEMOUTH GARDENERS' ASSOCIATION.

LECTURE ON ROSES.

ON December 3 a very interesting lecture, entitled "Thirty-five Years among Roses," was given by Walter Child Clark, Esq., F.R.H.S., of Michelgrove House, Bournemouth, before the members of the above association. There was a very good attendance, the president (J. H. Ralph Smythe, Esq., J.P.) presiding.

Mr. Clark grows Roses under conditions which would daunt the enthusiasm of hundreds of lovers of these popular flowers. His garden is studded with Pine trees, up the stems of which many climbing Roses are trained. His Rose-beds, which vary in size, number nearly seventy. Interest in the lecture was deepened by the production in colours, on a screen, of fine blooms of good old and new varieties of Roses. These coloured photographs were taken by George G. Hamilton, Esq., F.R.C.S., F.R.H.S., who recently showed them and lectured on the subject at Vincent Square, London. On this occasion he showed lovely views of the New Forest, views of rock gardens and of Orchids.

Mr. Clark remarked on the improved methods of exhibiting Roses in these days, and after referring in detail to many lovely varieties, said that he had found those possessing thick, leathery and glossy leaves were, practically, mildew resisters. The lecturer advised Rose-growers to give their trees two winter dressings, to prevent recurrent attacks of mildew and rust. Owing to the presence of the Pines in his garden, he said it was necessary to constantly remove all fallen needles from the soil. He commenced the cultivation of Roses thirty-five years ago, near Liverpool, by growing six plants in pots, all Teas. Then he had some houses built, in which the Roses, planted out in a central bed and side beds, did very well, owing to the fact that the top glass lights could be removed from the end of June to the end of November, thus ensuring full exposure of the plants after the first flush of Roses was past. The following were some of the varieties shown in true colours on the screen: General Macarthur, Sunburst, Lady Alice Stanley, Lyon, Lady Hillingdon, Mrs. Peter Blair, Hugh Dickson, Frau Karl Druschki, Lady Waterlow, Edward Mawley, Juliet, Rayon d'Or, G. C. Waud, Hiawatha, Carmine Pillar and other climbing varieties. At the close of the lecture there was a very free discussion, in which many members joined, and Mr. Clark replied to a number of questions. Messrs. Pearce, Heath, Evans and Pavey staged some lovely Begonias, *Feros*, *Primulas* and *Calanthes*. Hearty votes of thanks were accorded Mr. Clark, Mr. Hamilton and the president. The public as well as members attended the lecture.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

THE fifth meeting of the winter session was held at the Institute of Agriculture on Friday the 22nd ult. Mr. C. J. Simpson occupied the chair and about forty members were present. Mr. C. Wakely of the Agricultural Institute gave an interesting lecture on "Pot Plants and Potting." In the course of his remarks the lecturer covered a good deal of ground, and dealt with his subject in his usual clear and concise manner. In order to make his lecture of practical value, Mr. Wakely brought some specimens of plants and potting material, such as peat, loam and leaf-mould. At the conclusion of the discussion a hearty vote of thanks was accorded Mr. Wakely for his instructive lecture.

WARGRAVE AND DISTRICT GARDENERS' ASSOCIATION.

ON Wednesday evening, November 27, the committee arranged a couple of competitions in vase decoration, when prizes were awarded for the best arrangements. There were thirteen entries, and the whole of the results were of a very high order, reflecting great credit on the competitors. The prize-winners in the head-gardeners' and foremen's class were: 1, Mr. A. Hirsted, Old Vicarage Gardens, Shiplake; 2, Mr. W. H. Scott, Hermitage Gardens, Twyford; 3, Mr. H. Atlesey, Wargrave House Gardens; and in the class for journeymen: 1, Mr. Bristow, Scarlets Gardens, Hare Hatch; 2, Mr. R. Baker, Park Place Gardens; 3, Mr. Dancer, Scarlets Gardens, Hare Hatch. Votes of thanks were accorded the judges, Messrs. Hall, Pope and Stephens, who had a most difficult task to perform. The flowers used in the competitions were sent to the Royal Berks Hospital the following morning. Two new members were elected, making a total of twenty-two this session.

THE GARDEN.

No. 2144.—VOL. LXXVI.

DECEMBER 21, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Lenten Roses Flowering Early.—From several sources we learn that the Lenten Rose, *Helleborus orientalis*, is flowering with the Christmas Rose, *H. niger*. This is unusual, as the Lenten Rose does not generally flower until early spring. Owing to the mild weather, Snowdrops, Double Daisies and Polyanthus are all blossoming freely in gardens around London.

Wallflower Early Paris.—One of the most interesting plants in our outdoor garden just now is the Early Paris Wallflower. Seeds were sown in the open towards the end of April, and the plants, after being well thinned, commenced to flower towards the end of June. Since then it has always been possible to gather a posy of fragrant blossoms, and now, the middle of December, there is quite a goodly array. In addition to the ordinary yellow-flowered variety, there is one with rich brown blossoms. For their fragrance at this season, these Wallflowers are well worth growing.

The Golden and Red Barked Willows.—On several occasions of late very effective plantations have been noted of these two Willows. In some instances they were in wide areas, grown for commercial purposes, while in others they had been planted in the vicinity of water for landscape effect. In each case the result was very pretty, especially on a sunny day. Anyone who possesses a lake or pond might very well introduce a mass or two of these Willows, which are also very useful for planting about the banks of rivers or brooks. It must be remembered, however, that the best colour is only produced when the plants are cut down annually, for long, quickly-grown branches are always the brightest.

A Useful Winter Shrub.—The Himalayan Cotoneaster, known as *C. rotundifolia*, is worth planting extensively in gardens where showy fruiting shrubs are required, because birds do not interfere with the fruits as they do with those of other kinds. It is no uncommon event for the berries to hang throughout winter and early spring. Although a deciduous species in most places, it may retain its leaves throughout winter in a mild climate, and even about London they rarely fall before Christmas. Growing 4 feet to 4½ feet high, it is distinguished by its round, box-like leaves and rich red fruits, which appear with the greatest freedom from all parts of the branches. It grows quite well in any good garden soil.

A Pretty Greenhouse Climber.—Anyone who is in search of an uncommon climber for the greenhouse might with advantage choose *Heliophila scandens*, for it is at the same time a free-growing and a free-flowering plant, while it blossoms during late autumn and winter. A native of South Africa, it belongs to the Cruciferae, having the common

Wallflower as one of its relatives. Its long, slender branches are of a sub-shrubby character and attain a length of 15 feet or 20 feet, becoming during the growing period tangled together to form a mass of considerable size if care is not taken to regulate the shoots. The Wallflower-like leaves are dark green and persistent, and against them the freely-produced white blossoms are contrasted with considerable effect. A sunny position is essential to success, while the roots revel in loamy soil.

Ferns in Glass Bottles.—In the current issue of the *British Fern Gazette* Mr. C. T. Druey publishes some interesting particulars about Ferns in glass bottles. We quote the following: "We have still in our fernery a wide-mouthed white glass pickle jar, into which, at least eight years ago, we introduced a tiny Hart's-tongue, simply laid upon clean washed damp silver sand of little more than an inch in depth. The month of the jar was closed by a glass stopper rimmed with rubber, and this was tied down with copper wire to prevent removal. The Hart's-tongue grew until it filled the jar and reached the stopper, renewing its fronds for several seasons; a mass of confervoid growth had meanwhile covered the sand, and eventually two plants of *Lastrea Filix Mas*, doubtless arising from stray spores on the Hart's-tongue, appeared. The Hart's-tongue then died, but both the *Lastreas* are still alive, though small, despite the fact that absolutely no fresh water has been admitted to the jar from the day of its installation and the stopper is quite air-tight."

A Useful Rambling Plant (*Polygonum baldschuanicum*).—One of the most satisfactory ways to grow this plant is to place it in a pocket of good loamy soil in a sunny position at the foot of a loose-growing Holly or other evergreen tree, over which it may ramble without hindrance, for it is only when left to its own devices and allowed to grow in a perfectly free manner that the best results are obtained. Growing in such a way it rarely fails to produce an abundant crop of flowers each year, which are well set off by the evergreen foliage of the tree over which it is growing. Some people complain that their plants do not flower freely. There may be several causes for this. The plants may be too young, for, until the older branches are well developed, prolific flowering does not take place. Another cause of lack of flowers is the provision of too generous a root-run in rich soil, while a third cause is shade. As a rule, however, the plant may be depended on to give satisfaction, and the greatest difficulty people experience is in its propagation. It may, of course, be raised from seeds, but both cuttings and layers are somewhat erratic in their behaviour. Another effective use for the plant was noted some time ago, the whole of the west wall of a red-brick house being covered with it, the white flowers and fruit being very conspicuous against the wall.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Billbergia liboniana.—This good winter-flowering stove plant is not too common now, but it is worth notice at the present time, and I saw a nice plant the other day. It is about a foot high, and has a dense rosette of rigid leaves, with flowers of a wondrously fine colouring. The inner segments are purple and white, and the exterior ones are of a bright coral red, the whole being one of the most effective plants of the season. The plant had been removed from the stove to an intermediate house to prolong the bloom, and was grown in loam, leaf-mould and peat with some sand, the orthodox compost for most of the members of the genus.—A. M. D.

The Golden-leaved Chestnut (*Castanopsis chrysophylla*).—This is an interesting and useful evergreen shrub closely allied to the Sweet or Spanish Chestnut. It is one of those choice subjects for those who collect interesting and rare plants. Coming to us from California and Oregon, the selection of a sheltered spot when planting is desirable. At Kew several good specimens are growing in the Heath-beds near the Pagoda. At first sight the evergreen foliage and general character of the plants when no fruits are visible suggest the Evergreen or Holm Oak. Closer inspection, however, shows the rich golden colour of the under sides of the leaves; hence the name of the Golden-leaved Chestnut. Its affinity with the Spanish or Sweet Chestnut is revealed in the fruits, which, though smaller, are similarly spiny in character. An interesting fact is that, like some of the Oaks, the fruits take two seasons to mature. In early July this year, when the plants were freely clothed with the showy male catkins, the crop of fruits from the previous season's flowering was very noticeable. The fruits ripen in September, and should be sown a few days after gathering.

***Lilium tigrinum Fortunei*.**—This is one of the very best of the late-flowering Lilies for the open border, where it makes a goodly show. Immense bulbs of it are sent here every year from Japan in considerable quantities, and these push up a stout, erect stem that will reach a height of 6 feet or even more. The leaves are very numerous, and the entire plant—stems, leaves, flower-stalks and unopened buds—are thickly clothed with whitish tomentum. The flowers in the finest examples are borne in a large open, pyramidal-shaped head. In colour they are of a somewhat lighter tone than the other varieties of the Tiger Lily. For its successful culture no elaborate preparation of the soil is necessary, as in a border of fairly open loam it will succeed perfectly. It is necessary to plant the very large bulbs deeper than those of many other Lilies, a covering of about eight inches of soil over the top of the bulb being very suitable. The other Tiger Lilies are, as a rule, over before this is at its best. Unlike several other members of the genus, the Tiger Lily in all its varieties can be depended upon to flower well the first season after planting, but for growing in pots by far the best is the variety *splendens*, or *Leopoldii* as it is often called. This has very dark, smooth stems

and brightly-coloured flowers, with larger spots than the others. Under pot culture it retains its leaves well, which, as a rule, cannot be said of the rest.

***Primula malacoides* in Winter.**—Nothing has given me greater pleasure lately, both in the greenhouse and in a light and sunny window of the dwelling-house, than this comparatively new Chinese species of *Primula*. It was not so very long since we hailed it as a novelty, and now it is very widely distributed. This is to a great extent owing to its own intrinsic beauty and simple cultural requirements, also to the fact that seed ripens in quantity, and large numbers of plants can in this way be propagated from a single specimen. It has already become established as a market plant. With the exception of the white-flowered variety, I have seen no great divergence from the normal kind, the blossoms of which are of a pleasing shade of lilac. Judging, however, by the changes that have taken place in *Primula sinensis* under cultivation, and the more recent



FRUITING SPRAY OF THE GOLDEN-LEAVED CHESTNUT, A CHOICE EVERGREEN SHRUB FROM CALIFORNIA.

example of *Primula obconica*, we may, within the next generation, see many widely diverse forms of *Primula malacoides*. While on the subject of *Primulas*, I may mention that a recent note on *Primula Forbesii* pleased me much.—H. P.

A Winter-flowering Broom.—*Cytisus filipes*, a native of the Island of Tenerife, is one of the most graceful of all shrubby greenhouse plants. Another desirable feature is that its flowers are borne during the winter months. From the semi-pendulous nature of its branches, this Broom is sometimes grown as standards, being for this purpose grafted on to naked stems of the *Laburnum*. From my own point of view it is, I think, the more pleasing when the plants are allowed to grow by securing the leading shoot to an upright stick, and allowing the branches to dispose themselves in a loose and informal fashion. In this way it forms what has been described as a living fountain of

slender, bright green branches, with very few leaves, as in other members of the Broom family. The flowers, which are borne for a considerable distance along the shoots, are white, and of them a succession is kept up for some time. This Tenerife Broom may be increased by grafting on the *Laburnum*, while cuttings may be struck, but it is not readily propagated in this way. Seeds are, however, often ripened, and from these young plants can be easily raised. True, they will not flower in quite such a small state as those from cuttings, but they form more handsome specimens.—H.

Sweet-scented Verbena.—I was much interested in the reference to this *Verbena* (*Aloysia citrodora*), page 610, issue December 7. Of fragrant-leaved plants it is in the front rank. For a number of years it was my duty to fill a large bed with sweet-scented plants, either of flower or foliage, and I used a number of old plants of this *Verbena* among others. Several of the specimens were 4 feet high and as wide. They were allowed to grow at will during the summer, pruned hard back late in autumn, and stored in a coolinery through the winter, receiving one or two waterings. In spring new shoots grew again, and the plants were, in due course, transferred to the bed. Every spring I propagated plants freely, selecting young shoots 4 inches long and inserting them in almost pure sand in a hotbed.—B.

What to do with Frozen Plants.—Your leading note in the issue for December 7 is very timely. It is pithy and to the point, and if acted upon, in case of frost reaching any plants, the owners would find how very useful the advice was. I only wish here to give an instance of the efficacy of the treatment recommended. Some years ago I had a large frameful of the Castor Oil Plant (*Ricinus Gibsonii*) badly frozen early in the spring. The attendant had opened the frame, and the sun was just reaching them when I passed. The leaves all drooped like so many damp cloths round the main stems of the plants. I at once broke the ice in a cistern near and syringed the plants with the ice-cold water, and having closed the lights and put on several mats, waited three or four days until the frost had gone before again opening the frame. All the leaves had regained their normal positions, and only one had two brown patches on it.—G. G.

The Fan Palm in Scotland.—The Fan Palm is much harder than many can understand, and there are to be found a goodly number of plants in Scottish gardens in different parts of the country. They cannot be said, as a whole, to look too happy, but this is not due to any want of hardiness when planted in suitable situations, but rather to the effects of wind, which one finds is very destructive to the beauty of the plants. It is many years since the writer came upon a good plant of the Fan Palm in an East Coast garden, and since that time he has seen a number in different parts of Scotland. It is generally best when sheltered by other trees or shrubs, as where there are walls there are often eddies and gusts of wind which prove injurious. That it is fairly hardy may be seen when I state that it is to be met with in a garden well up Corstorphine Hill, near Edinburgh, where the place is subject to very high winds. In a good many gardens in the West the Fan Palm is also to be met with.—A. M. D.

Winter Aconites Flowering Early.—The first Winter Aconite of 1912 opened on January 1; the first of 1913—if I may use the expression—opened on December 8, 1912. The latter date is the earliest I have ever found it in flower in Suffolk.—T. H. DIPNALL.

Fragrant Chrysanthemums.—That old decorative variety Bronze Phœbus has a delightful scent, and one of the market-growers at Davidson's Mains (Mr. Alexander Porter) continues to grow it for the Edinburgh market partly on that account.—CHARLES COMFORT.

Fatsia japonica.—Is it not rather uncommon to see good-sized specimens of this subject growing outside and standing the winter in bracing districts? This locality—Highgate, North London—is the first and only place I have come across them so grown. The bulk of the plants I have noticed in gardens have been leggy, with only a few leaves clothing the top portions of the stems, and these were never left to face the winter. Further South I am aware they are to be found always in the open; perhaps they are hardier than is usually believed. Anyhow, there are here in two different gardens two good plants of about four and a-half feet high and 3 feet to 4 feet across, and very healthy in appearance. Peculiarly attractive just now is the unfolding of their burr-like headed inflorescence. This plant is better known to some as *Aralia Sieboldi*.—C. T.

A Useful Winter-flowering Orchid.—*Zygopetalum Mackayii* is a fine Orchid for an amateur's Orchid-house, where the temperature does not fall below 50° Fahr. The scapes are produced during the winter months and the flowers are a yellowish green, while the broad lip is white, streaked and spotted with violet purple. A few weeks after the spikes are removed any repotting may be done, using a mixture of the best fibrous loam and peat, with a few finely-crushed potsherds to render the whole porous. When in good health, *Zygopetalum Mackayii* is very vigorous, and requires ample pot room to get the best results. Keep the plants moist throughout the year and a careful watch for thrip, which is extremely fond of the new growth. There are many home-raised seedlings on the market equal to imported specimens in regard to colour, but possessing a more robust constitution, and for this reason an amateur should always secure the home-raised seedlings.—S.

"Carnation Notes" in "The Garden."—May I express appreciation, before the year closes, of the increased attention—the more regular articles—which has been devoted to that most popular flower, the Carnation? True, the special notes referred to have dealt with the border section only, but there have also been articles on the Malmaison and perpetual types. What other plant can furnish us with three such valuable divisions—the Malmaison, the perpetual and the border—and each giving us a good measure of beauty and fragrance? By the way, I believe it is thought by many Carnation-growers that the outdoor kind of Carnation for the future will be a hybrid between the last two. It would be most interesting if any reader of THE GARDEN, having experimented with plants so obtained, will give to other readers the benefit of his results.—C. T.

FORTHCOMING EVENTS.

December 30.—Hereford Fruit Show (two days).
January 7, 1913.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster, S.W.

GARDENING ACROSTICS.

AS announced last week, we are publishing a series of eight acrostics based on gardening or simple botany. Prizes of £3, £2 and £1, respectively, will be awarded to those sending in correct solutions of all the acrostics. In the event of more than one competitor sending in eight correct solutions, the prize-money will be divided as follows: If two competitors are successful, the first and second prizes will be added together and then divided; if three or more, the whole of the money will be added together and divided. The second and third prizes will be similarly dealt with, should similar circumstances arise in regard to them. The names of those who have correctly solved the problems will be published from week to week, and the final list of prize-winners in our issue of February 15, 1913. In all cases the Editor's decision must be final. The solution to Acrostic No. 1, which appeared last week, will be published, together with a list of those who have correctly solved it, next week, and the solution to No. 2, which is printed below, will be published in our issue dated January 4, 1913. For full rules governing the competition readers are referred to page 623 of our issue for last week.

DOUBLE ACROSTIC No. 2.

A famous Victorian gardener, editor and designer. The first letters give his Christian name and the final ones his surname.

1. The initials of a celebrated Horticulturist and Botanist of the early half of the seventeenth century.
2. Royal and Saintly, I am alone in my glory. I might be a flower, but I am not.
3. I look like a pistil in the middle of a large white petal. What would a botanist call me?
4. Milder than an onion—pedantically spelt.
5. A disease-proof tuber would be worth far more than its weight in gold. Of what?
6. A part of London celebrated two hundred years ago for its vineyard.

Solutions of the above must be sent so as to reach the Editor at 20, Tavistock Street, Covent Garden, London, W.C., not later than December 28. Mark the envelope "Acrostic" on the upper left-hand corner.

CULTURAL HINTS ON NEW AND RARE PLANTS.

ALPINES.

(Continued from page 623.)

Primula Winterei.—This proved quite the idol of alpine plant-lovers when first shown, the mauve, white-centred flowers appearing in a striking setting of powdery leafage. The plant is Himalayan, and very charming when in flower. Seeds should be carefully preserved, and the plant raised freely. It prefers a rich, sandy soil. Flowers in April and May.

Primula bulleyana.—Here is a plant to join forces with *Anemone Allenii* in the cool and moist places of the garden in rich soils. No praise is too strong for it. The flowers are of golden orange hue, the buds reddish. It comes from China. The plant seeds freely, and is easily raised if the seeds are sown soon after being harvested. Hardy, free and vigorous, this plant of many merits should be grown by all. There is no other *Primula* like it.

Primula littoniana.—A remarkable plant in every way; novel, beautiful and striking, and

certainly one of the most effective when grouped. The flowers are arranged in a spike raceme, and in the distance are not unlike an *Orchis*, save for the red colour at the tip of the spike. The plant grows freely in cool, moist soils, and is easily increased by means of seeds. The established plants may be put out at any time. Of Chinese origin.

Sedum pilosum.—This is a very distinct and pretty member of the genus, with woolly, almost *Sempervivum*-like rosettes of leaves $1\frac{1}{2}$ inches across. The flowers are whitish or pale lilac. Prefers a dry chink at the base of a rock. Grows freely in grit, soil and old mortar rubble. Easily raised from seeds.

Silene Hookeri.—In the rock garden exhibits at the International Show in May last many lovers of alpine plants made the acquaintance of this for the first time. The flowers are rose pink and much lacerated. For a sunny chink in the rock garden it will prove quite a gem. Best raised from seeds. Succeeds in loamy soil perfectly drained. It is Californian.

Patrinia palmata.—A novelty of distinction and merit from the Japanese Alps. The shortly-spurred flowers are yellow profusely borne on branched stems nearly a foot high. The leaf-tuft is a miniature, practically, of some *Heucheras*, and when established will doubtless increase quite freely by means of division. A quite hardy, free-growing subject.

Lewisia Cotyledon.—Should this species with *L. Howellii* prove to be perfectly hardy in British gardens, they will constitute two of the most interesting alpine a rock garden could contain. Both have rosettes of fleshy leaves, the former having golden yellow, crimson-striped flowers; the latter, rose-coloured flowers. The plants are sun-lovers, and should be given a warm position. For the sake of safety protection is suggested. They are Californian.

(To be continued.)

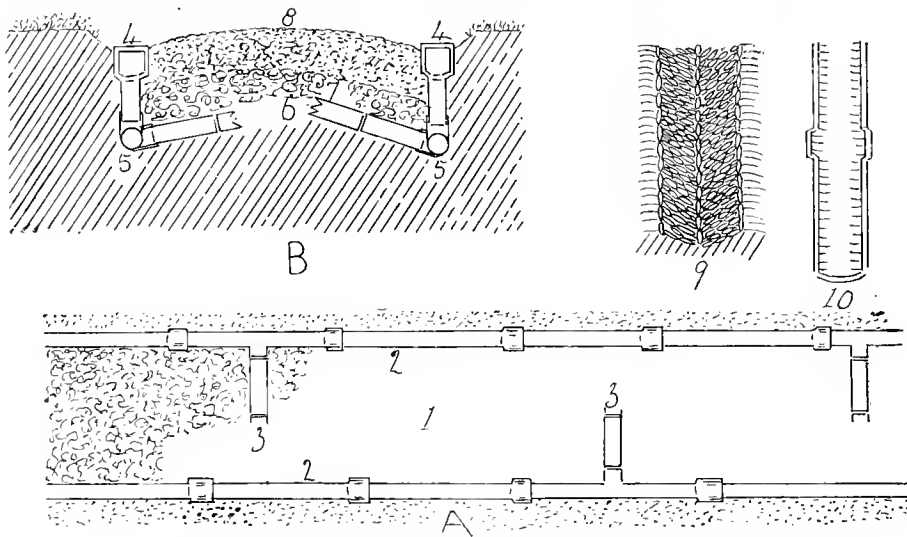
THE MAKING OF GARDEN ROADS AND PATHS.

THE construction of roads and paths is a very important item in the laying out of a garden, for it depends largely on whether they are made well or badly as to whether they can be used or not in wet weather. Of the many points to consider in connection with the work, one of the most important is drainage. When the ground is naturally well drained, the work is simplified, for there is little necessity for the construction of an elaborate drainage system. Surface water can be easily carried away by catchpits made here and there along the margins, the size and depth being regulated according to requirements. But when the ground is naturally heavy and badly drained, it is highly important that a good service of agricultural drains should be laid to prevent the path from becoming waterlogged. In such a case the ground should be excavated to the required depth and be left 2 inches or 3 inches higher in the middle than at the sides. A drain can then be formed along each side, with branches 20 feet or 25 feet apart falling each way from the middle. Connections must also be made between the surface and the side drains for the purpose of carrying surface water away. This is really more important when the road or path is to be used for vehicular traffic than when it is to be wholly for the use of pedestrians.

for if such a road is not well drained, it is impossible to keep it in good condition.

The contour of the ground is another item which has an important bearing upon the construction of roads and paths. When the natural ground is moderately level, or has a slight general slope, the work is more simple than when undulating ground or land with a rapid fall has to be dealt with, for in the one case it may be necessary to reduce hillocks and fill up depressions both for appearance and to ease the road for traffic, while in the latter case steps must be taken to make the road as easy as possible to climb, and also to provide against its being badly washed by heavy storms. When removing hillocks and filling little depressions, care must be taken to arrange the sides of the road in such a manner that they look perfectly natural; thus it may be necessary to regulate the ground for 20 feet or 30 feet back in order to make it approach the road more or less in the form of the sides of a valley. Should it be impossible to alter all hard lines, then banks of shrubs, judiciously placed, may be made to mask the defects. The gradient

A path which has been excavated 6 inches or 8 inches deep should be drained, if necessary, and have 3 inches of hard core, stone or brick rubble placed over the bottom. On this place from 1 inch to 2 inches of coarse clinkers, and ram them down until a level surface is formed. Then proceed to fill up with whatever material has been selected for the surface. As a rule, nothing beats a good binding yellow gravel which has not been screened too finely. This must be spread and well rolled while moist, otherwise it will not set. There are two periods when gravel is objectionable. One is the early days of a thaw after a frosty period, and the other is a light rain after a dry period. At both these times the surface is wet and soft and the lower part dry and hard, consequently the upper part is lifted by the feet or by wheels. There is no help for it, and nothing can be done to remedy it except keeping off the path while it is in either of these conditions. For this reason it is often desirable to lay asphalt paths in small gardens where the paths are in everyday use, but when this material can be avoided, avoid it by all means.



DIAGRAMS TO SHOW THE CONSTRUCTION OF GARDEN PATHS.

A.—Plan of drains in bed of path: 1, bed of path; 2, 2, side drains; 3, 3, branch drains. B.—Section of path showing drains: 4, 4, catchpits at sides of path; 5, 5, section of side drains showing connections with surface and branch drains; 6, branch drains in bed of path; 7, rough material; 8, the finished rounded surface of the path. No. 9 shows a paved channel, and No. 10 section of pipe channel.

of a steep road or path may be eased considerably by using good bold curves; but when the road is for vehicular traffic, the curves must have really good sweeps, for sharp turns are both awkward and dangerous. Then, to stop the wash of water flowing rapidly down and carrying gravel with it, it is a good plan to have large houlders placed in the gutters every 20 yards or 25 yards immediately below a drain, while in some cases it may even be advisable to pave the gulleys with setts or to lay glazed earthenware pipes, cut in longitudinal section, along the sides.

The depth to which it is necessary to excavate a path or road depends entirely on the purpose for which it is to be used. A path which is simply for use by pedestrians may be from 6 inches to 8 inches in depth, while one for light vehicular traffic should be from 9 inches to 12 inches, and if heavy traffic is anticipated, from 12 inches to 18 inches; but such roads are, as a rule, best paved, that is, when they are destined for service roads for gardens and back premises, rather than for carriage drives.

Loose gravel or granite chips are sometimes used in preference to a binding gravel, but these are not very satisfactory, especially when the path is destined for heavy use, for the loose chips soon become filled with soil and other dirt. By rolling on every possible occasion, a well-made gravel path keeps in good condition, and there is nothing to beat it for appearance. Carriage drives and roads must be given from 6 inches to 12 inches of hard core, according to depth, and over this, flints or broken granite should be placed to bring the road within 2 inches of the surface. Make it as firm and level as possible, then cover with gravel and roll well. Such a road will stand a considerable amount of wear, providing wheel marks are regularly raked over and the surface frequently rolled. A fertile source of injury to roads is the heavy shade of trees, which does not allow the surface to dry, and by their leaves falling and not being regularly cleaned up. Foreign matter of any description must be removed from the surface at once if the road is to remain good. Since the advent of motors, some people have taken to tar

spraying the surface of carriage drives. Roads so treated wear well, but are less pleasant to the eye than those surfaced with gravel.

For temporary roads there is no need to go to the same trouble or expense as is necessary for permanent ones, and excellent roads, capable of carrying a lot of heavy traffic, may be constructed of old railway sleepers, which may often be obtained for 9d. or 1s. each from the railway companies. The life of these old sleepers may be anything from five to twelve years, therefore a good deal may be said in favour of their use.

THE FRUIT GARDEN.

THE WINTER SPRAYING OF FRUIT TREES.

THE spraying of fruit trees is fast finding favour with those who but a short time ago were quite sceptical as to any advantage to be derived from the work. As to the efficacy or otherwise, one has but to remember how much has been done of late by fruit-growers for profit in the spraying of their trees, and one may rest assured that these men would not waste valuable time and material if the trees were not benefited in some way. At one time I was inclined to doubt the wisdom of spraying the trees for the many insect pests and diseases that are now recognised as being injurious in some form or other; but having experienced several bad attacks of Apple scab, I was tempted to try remedial measures, and I am pleased to say, with remarkable effect, so that I am now a strong convert to the practice of systematic spraying. Perhaps my recent sceptical feeling was caused by being some years ago wrongly advised in the use of a certain spray fluid, so much so that I lost all the leaves from many trees, which made me extra careful. No doubt the yearly practice of many years ago of coating the stems of orchard trees with quicklime by the aid of an ordinary whitewash brush led up to the invention of sprayers, which have gradually been improved, so that now there is not the slightest difficulty in coating the trees thoroughly with whatever insecticide is required.

Advantages of Spraying.—"What are the advantages derived from spraying?" the sceptic will naturally ask. First, the removal of moss and lichen from the branches, which must do much harm to the growth of the tree. The necessary vigour of trees that are coated with a full crop of moss, and at times with lichen fully 3 inches in length, must be impaired. Even Gooseberry trees which are susceptible to the growth of moss on the branches and main stems never grow vigorously, and in consequence cannot produce crops of fruit equal to what may be naturally expected from them. In the same way are Currant, Apple, Pear and Plum trees affected.

Secondly, Apple scab (*Fusicladium dentriticum*) may be quite overcome by the aid of spraying, and if this alone can be achieved, then the work of spraying is at once repaid. What is worse to the Apple-grower, market or otherwise, than to find almost the whole of the fruit, by the time it is the size of a Walnut, full of disfiguring specks and rust, and which later on contracts, or, in other words, its presence kills the skin of the Apple, preventing any expansion and, as the fruit swells, causing the skin to crack, so spoiling entirely all the fruit affected? Some varieties are more liable to Apple scab than others; for instance, Lord Grosvenor, Warner's King and Stirling Castle

are very susceptible to this fungus disease, which is obstinate in its attack. It can be quite eradicated by assiduous attention.

Thirdly, the Apple-sucker (*Psylla Mali*), Codlin moth, winter moth, Gooseberry sawfly and lackey moth, as well as attacks of aphides, green and black, can all be got rid of by spraying if done in an intelligent manner and with the right material. That great enemy of outdoor Peach culture—blister, or leaf-curl—is caused by fungus, which appears when the young growth is checked by cold winds, and can be removed by spray fluids. Enough has been said to show the value of spraying; the next point is how to efficiently carry out the work for the various remedies.

The Best Spraying Apparatus.—The first point to consider is the form of sprayer to use for the various washes required. In the case of a few trees, such as the amateur may require, an Abol syringe with various sizes of nozzles will suffice. For an ordinary private garden a knapsack sprayer is the best means of carrying out the work. What is required is an efficient article that is the easiest manipulated. I can recommend most strongly the "Holder" pneumatic sprayer. This sprayer has a holding capacity for two and a-half gallons of liquid with a self-contained pump. Within a couple of minutes a pressure of 70 lb. is obtained, with which the whole of the liquid is sprayed over the trees in a fine, mist-like spray without further pumping to a height of 15 feet, according to the length of hose and guiding-tube. With this sprayer both hands are left free, which is such an improvement over those sprayers that require continuous pumping. The container is made of solid welded copper to prevent corrosion. The machine will apply lime or anything in the way of spray fluid.

The Four Oaks Spraying Company make an excellent knapsack sprayer, invented by Mr. W. H. Lawrance, Inspector under Destructive Insects and Pests Orders in the county of Hants, and who has had considerable experience in spraying, both winter and summer. The special feature of this machine is the remarkable ease of working; the handle comes over the shoulder, and the working action is very easy and non-tiring. All classes of chemicals can be used with this machine, as it has a double container. In the case of those requiring added power where a large area has to be sprayed, Messrs. Drake and Fletcher make an excellent machine, which they name the "Mistifier," made quite narrow for passing up and down the rows of trees. What they term their "M. M. O." machine holds thirty gallons of liquid, and has two sprayers, which are worked by two men, one on each side of the machine, if necessary. One person continually pumps the liquid to the sprayers, and with the machine kept regularly supplied with spraying fluid, much work can be got over during the day. Naturally, the firm have larger machines of the same type holding up to sixty gallons of liquid.

These sprayers, including the Knapsack Patent, can be used for Potato-spraying equally well, and it is surprising what a large area one man can get over in a short time when fully accustomed to the work. In passing, I might say that dry spraying is much preferred by many for Potatoes, as being more economically applied. This part I will deal with fully later on.

The Best Winter Spraying Fluid.—Like all other details in connection with the garden, there are many recipes for the cleansing of trees from moss, lichen and insect pests. One of the most efficacious, safe and easily applied is quicklime. Not only does lime cleanse the trees from moss and other extraneous growth, but it is valuable as a stimulant to crops growing underneath the trees, as well as being beneficial to the trees themselves, especially where lime is deficient in the soil. For these reasons lime is largely employed by fruit-

the liquid passes when filling the sprayer. In the case of the "Holder" machine the necessary pneumatic pressure is steadily pumped up, and the machine is then ready for use. The operator, with the sprayer on his back, occasionally gives the machine a tilt to keep the lime well mixed, so that it is sprayed evenly on to the trees. Various lengths of hose and lances are required, according to the height of the trees to be sprayed. With various brass unions the one sprayer can be employed when required. In applying the liquid to the trees, the operator will soon learn how much is required to coat every portion. Each grower has his particular time to start lime-spraying. Some begin at the end of November, others not until the buds are bursting in spring, some even later than that. In my case I commenced to lime-spray the Apple trees on April 16 this year. At that time the flower-buds were quite prominent. No harm accrued; indeed, I tested some trees with the blossoms fully expanded, and with satisfactory results.

Apart from lime there are many other insecticides which may be employed, with good results; for instance, the Woburn wash, as it is termed. Bentley's, too, make a capital powder for the cleansing of trees from moss and lichen, and really well it answers. Messrs. Strawson prepare a mixture known as Strawsonite, which has a good effect upon the trees during the winter. Then there are the various sprayings required for the usual spring insect pests, such as the psylla, aphid, &c., which I purpose dealing with later on.

Swanmore Park. E. MOLYNEUX.



A BEAUTIFUL ALPINE, ASPERULA HIRTA, IN THE GARDENS OF THE
LUSANNE UNIVERSITY AT PONT DE NANT.

ROCK AND WATER GARDEN.

A DAINTY WOODRUFF. (*ASPERULA HIRTA*.)

THIS tiny Woodruff is a dainty little alpine, and seems to appreciate being planted in a crevice, where its dwarf growth can spread out fanwise over the rocks, so securing the fullest amount of sunlight, yet always having its roots in a moist medium behind the large blocks

of stone. The flowers, which are trumpet-shaped, are generally white, or faintest pink, in colour; but when they receive the fullest amount of light, the pink tint is more pronounced. Recently, while visiting the garden belonging to the Lausanne University at Pont de Nant, above Bex, at the eastern end of the Lake of Geneva, I noticed this little Woodruff growing very vigorously, and always in the position indicated above. Another member of this same family, which there flourished amazingly, was *Asperula nitida* (or *A. Gussonii*). While not one of the easiest of alpine plants to grow in our low-land gardens, it seemed to revel in the almost natural conditions at Pont de Nant, where, during the winter, a snowy thick mantle ensures a complete rest to all the plants in the garden, which is situated at an altitude of 4,110 feet. REGINALD A. MALBY.

growers. The best hard stone lime is necessary, not that which is soft, as is sometimes the case when made from some kinds of chalk. Eighty-six pounds of lime is sufficient for fifty gallons of water. This amount of lime should be put into a galvanised vessel, adding a small quantity of water to start the lime dissolving. As this proceeds add more water, constantly stirring the whole with a shovel, never allowing it to become quite dry nor making it too wet. Just keep it sufficiently thin to stir and become regularly dissolved. When this has taken place, strain the whole through a fine sieve into another vessel to remove any small portions that may tend to choke the pumps or spray nozzles; but when the lime is good this seldom happens. Add water sufficient for the quantity noted. Each sprayer is fitted with a strainer, through which

ROCK GARDENS IN THE MAKING.

(Continued from page 626.)

The Last Phase.—In all gardening operations planting follows "making" as night follows day. In previous chapters I have touched on some of the more important phases of rock gardening chiefly from the amateur's point of view. No attempt, however, has been made to make it exhaustive or complete. To have done so would have required a volume of considerable size; indeed, I know of no work wherein every phase of rock gardening has been discussed, or that very considerable improvement were not possible of introduction. What I have endeavoured to do, so far as the ground has been covered, is to point the way, and if so much has been accomplished helpfully to those for whom it was intended, I shall have played my part. If not—if I have not dived into the innermost recesses, crevices, cracks, crannies or fissures of some individual case or circumstance—there is no occasion for those who

gardens were of the miniature type, only possible of inspection from the front, there would be some excuse for the, wrong to which I refer. The same thing, however, is done in not a few instances where rock step or path has been arranged to permit the owner to wander at will, the result generally a very incongruous whole. Deftly-arranged rock steps or paths, while permitting a close inspection of all the plants, also present a dual possibility to the planter; and ornamentation of such a kind—rock bristling with vegetable-life at every turn—is rock gardening in its truest form; to the intelligent planter ideal. It is in this connection, too, that I must again ask my readers to refer to the coloured plate given of

The Friar Park Rock Garden in the issue dated October 26, 1912. The teaching value of the coloured plate is great in the direction indicated. I do not say the picture is perfect, however, from the planter's point of view. It is too embracing; no single picture could possibly be perfect; that type of perfection which the rock garden itself

area of ground. These are the things that not only make for success; they are those which furnish and garnish, wedding plant to rock and rock to plant as though the twain were made for each other's company and were inseparable. Evidences of such thoughtful work as this occur in the immediate forefront of the coloured picture, where a trickling stream of purple Aubrietia forming a shallow pool lower down invests its surroundings with great charm. A little higher up, on the right, a flood of colour is contributed by some of the free-flowering Dianthi, a genus rich in colour and variable in habit. The larger-growing of these alpine Pinks are useful in many ways, though most of all, perhaps, in the colour effect of their massed colonies, good at 50 feet or 100 feet away, and in the glaucous grey of their leaf-tufts in autumn and winter. The fine group of Alpine Pinks shown in the coloured plate already referred to is

Very Suggestive of Nature's Handiwork, and as such of much teaching value to the planter.

There is no formality, no abrupt terminating of the group; on the contrary, there is abundant evidence of the plant effacing rock, tumbling from ledge to ledge, pressing itself into every crack or crevice as it proceeds, reproducing, apparently, in miniature the flowery tufts and effects from which they sprung. It is as though seeds or shoots separated from the parent group had made for themselves a home, and, pressing onward and downward, bejewelled the rock as in Nature's own inimitable way. The group itself at Friar Park is, as may be imagined, of considerable extent, and a great joy to its owner and all who see it when in flower. In its naturalness and suggestiveness it is the most perfect bit of planting that I know, a masterpiece of the art which conceals art. Hence it is worthy of study and of emulation, not of a slavish kind, but of the principle embodied therein, and which is applicable to other plants besides. E. H. JENKINS.

*(To be concluded.)***A DWARF EVENING PRIMROSE.***(EITHERA ARENDsii.)*

This is a pretty plant for a sunny, well-drained bank, or ledge of the rock garden. Running freely at the



A DWARF EVENING PRIMROSE, (EITHERA ARENDsii), IN MR. E. A. BOWLES' ROCK GARDEN.

all unwittingly have apparently been ignored to flounder in the dark; the columns of THE GARDEN are as free to them as of yore, and with their grievance or their requirements duly set forth, the case will receive immediate attention. Hence no apology is made for shortcomings or incompleteness, since these very things will of a surety exist in that phase of the subject with which I am now about to deal. In discussing the

Planting of the Rock Garden, one cannot but direct attention to one of the commonest of errors and the way the work is done, despite intelligence, travel and the great teachings of Nature herself. We plant the choicest things usually low down; the bolder things with trees and shrubs on the higher parts. In Nature the exact opposite is the case; the nearer we approach the glacier or the field of the eternal snows, the dwarfer and more diminutive does vegetation become, till presently it virtually ceases altogether. It may be that in lowland gardens we so plant as a matter of convenience, and if all rock

demonstrates so well at every turn. Perfection, indeed, from our present standpoint could only have been attained by a great series of pictures, fifty or a hundred such, showing in more or less detail the individual subject now in sweet communion with, or at other times almost entirely effacing, rock, than which there is no greater lesson to teach. Such things, indeed, should be regarded as fundamental, first principles, as it were, to all who would see their rock gardens glittering with plant-life, instead of so much coarseness and so much of uncompromising rock, serving little or no useful purpose.

To Achieve all This, or, indeed, any considerable proportion of it, the planter must know his plants, must appreciate their habit and full development, must know of their likes and dislikes, their preferences for sun or shade, must be able to differentiate between the lover of crevice or fissure and that other type spreading laterally and more mat-rooting, which finds a congenial abiding-place on a larger

root and flowering on young plants from these runners, it soon covers a good space with flowers of a singularly delicate rose pink, much the shade of a wild Dog Rose, the resemblance to which is further borne out by the white eye. I believe it is one of the many cross-bred plants raised and sent out by Mr. Arends, and that its parents are *EITHERA speciosa* and its variety *rosea*, a beautiful plate of which is to be seen in the second volume of "Flora and Sylva." The newer form differs in having slightly larger flowers, more white in the eye, and a more delicate shade of pink on the rest of the petals, and thank goodness—or Mr. Arends—in possessing a much harder constitution, derived presumably from its white parent. The clump shown was planted on a newly-constructed bit of rock garden last April, and by July, in spite of many outlying portions going away in the baskets of my garden visitors, had formed the colony here seen, and continued to flower till late in October. E. A. BOWLES.



A JUNE BORDER OF IRISES AND LUPINES

COLOURED PLATE.

PLATE 1461.

A JUNE BORDER OF IRISES AND LUPINES.

IT is a great advantage in planning gardens, where suitable ground can be given, to allot a certain number of enclosed spaces for the flowers of a limited season only. It enables the designer to create a complete picture of flower beauty in a way that cannot be done

where the bloom has to be spread over a longer time. Colour photography from Nature has not yet reached such a degree of precision and accuracy as can do justice to a careful scheme of colour grouping, but the illustration may serve as a suggestion of the effect of a double border, mainly of Flag Irises and Lupines, at their fullest bloom in June.

The Lupines are of three kinds: the perennial, in five distinct colourings — white, purple-blue, pale purple shading to white, pink and red-purple; then Tree Lupines, white and yellow; and the good hybrid, Somerset, which, I believe, we owe to Messrs. Kelway of Langport. It is not so coarse in growth as the ordinary Tree Lupine, is very full of flower, and can have its lifetime prolonged for several years by severe pruning after blooming, some whole branches being cut away and the remainder shortened back. The pale purple-shaded perennial Lupine is a very fine plant, differing in character from the usual kinds that are so easily grown from seed, in that its whole growth is larger and handsomer, but perfectly balanced and proportioned, with a form of rare perfection, both of leaf and flower-spike. Increase of size, in plants of the same nature, often gives an impression of coarseness; but in the case of this good Lupine the plant is more refined, although larger than its fellows. With me it never bears seed—all the others seed freely.

The white Tree Lupine is a charming plant both for such a border and for groups or single plants at shrubby edges. As I know it, it is shorter-lived than Somerset, and is at its best the second year from seed. There are pink China Roses in the June borders that group charmingly with it. Among the purple Irises, a very useful plant is *Peltaria alliacea*, not so well known as its merit deserves. It is the white mass in the picture just this side of the tall yellow Lupine; another mass of the same is further away on the right-hand side. It is a cruciferous plant, bearing spreading corymbs of soft white bloom; the individual flowers are of the Sweet Alyssum class, but of a warmer white and more showy. Nothing could better set off the masses of purple Iris or

the pink of the China Rose. When the bloom is over, the lower parts of the stem have a half-woody, Cabbage-stalk appearance that makes one think that the plant is done, but after the stems are cut down it spreads out at the root

The borders are arranged in colour groups, masses of purple and white, with the pink of China Rose and pink Lupine passing to pale and strong yellows, and then again through pale yellows to purple, white and pink. Irises of red-purple colouring have a group to themselves, with red-purple Lupine and a groundwork of the red-bronze



FLOWERING SPRAY OF GARRYA ELLIPTICA, ONE OF THE MOST BEAUTIFUL HARDY SHRUBS IN THE WINTER GARDEN.

foliage of *Heuchera Richardsonii*; but they also pass through those that incline to pink, to the pure pink of the China Roses, and then to white. *Olearia Gunnii* is used for white bloom, and small bushes of Golden Privet among the yellows. A taller bush of Golden Privet looks over the Yew hedge, and from some aspects joins in with the yellow. The pretty Catmint (*Nepeta Mussinii*) and white and pink Pinks come close to the path edges.

THE FLOWER GARDEN.

THE FLOWER GARDEN IN WINTER.

HOW deep-rooted are many of the fallacies connected with the garden! Many an one, whose garden during the months of summer and autumn was resplendent with floral glories, as the fallen leaves make a thick carpet over "fair child"

over to desolation, accepting in its entirety the false dictum, "nothing will grow in winter," and consequently his garden is as dreary and depressing as the days themselves. No garden, however small, need be destitute of flowers all the winter months. With the first severe frost the summer delights must wither and die; but many plants defy the weather of a normal winter and repay the care bestowed upon them by giving us that most prized luxury—a flower in winter.

First, I would mention *Jasminum nudiflorum*, which will grow in almost any situation and in almost any soil. Allowed to climb at will over an arbour or paling fence, or closely tied back on to a wall, its beautiful yellow blossoms, springing direct from the leafless stems, opening in late November and onwards, form a patch of colour which must be seen to be fully appreciated. The sprays of blossoms last well in water, thus affording an extra pleasure for the home.

Next, the brilliant berries of *Crataegus Pyracantha*, with its background of dull green leaves trained upon the wall of a house, afford a mass of dazzling brightness upon the darkest of days. This evergreen plant requires little attention when once established, except the pruning away of excessive growths, and, together with *Jasminum nudiflorum*, should find a place in every garden.

Another plant that will thrive in almost every position and afford colour when the Jasmine has finished flowering is *Cydonia japonica*. Given a south aspect, in favourable soil it will reward the grower with an abundance of crimson blossoms, which can also be utilised for indoor decoration. The plant should not be too severely pruned, and in the summer months a mulching of manure will be beneficial.

Coming to the garden beds proper, *Helleborus niger* (Christmas Rose) will provide the necessary white blossoms. Christmas Roses, however, are all the better if protected from wet by either a hand-light or a bell-glass, so arranged that plenty of air circulates round the plants. Thus grown, they will last several years and be an ever-welcome treasure in midwinter. The Violet, given slight protection and well grown on a

G. J.

sunny border, can be coaxed into bloom before Christmas, and will supply the table for many weeks. The writer made it his proud boast that for years his Christmas gift to his mother was a bunch of her much-loved Violets, picked from a warm border on the south side of the house and grown as before stated. The Primrose, too, is most amenable to the same treatment, *Primula vulgaris alba flore pleno* being especially so, producing an abundance of double white blossoms, which are the better if protected as suggested for Christmas Roses.

For the shady parts of the garden—along walks and, in fact, in any position except a very dry and hot one—the Winter Aconite (*Eranthis hyemalis*) will flourish, imparting beauty and brightness to the garden in January and February. The Winter Aconite, so called from its time of flowering, is a sparkling gem, a golden cup set in emerald green, for the bloom springs direct from the centre of the leaf. Winter Aconites are very hardy, and are often to be seen pushing upwards through the snow.

One often marvels why such a hardy and beautiful winter or early spring flower as the *Chionodoxa*, the *Glory of the Snow*, is so seldom seen in small gardens. The cheapness of the bulbs places it within the reach of all, and, grown in combination with Snowdrops, the garden would be enriched for many years to come, as the bulbs, once planted, may remain untouched. The advent of that "herald of the sun," the *Crocus*, with its glorious golden cups upreared beyond its graceful foliage, is accompanied by the brilliance of *Arabis*, *Aubrietia*, *Hepatica*, *Myosotis* and *Primroses*, and once more the songs of birds are heard in the trees and the earth awakens to renewed life. S. W.

[There are other flowers that brave the elements in winter, such, for instance, as the *Winter Sweet* (*Chimonanthus fragrans*), *Wych Hazels* or *Hamamelis*, and *Garrya elliptica*, a winter spray of which we give an illustration on page 638. Doubtless there are others that may be called to mind, and we invite short notes from readers about them.—ED.]

AN INTERESTING WINTER IRIS.

ONE of the most interesting plants at the meeting of the Royal Horticultural Society, held on the 3rd inst., was the charming little *Iris* of which we give an illustration. This was shown by Messrs. R. Wallace and Co., and is an albino form of *Iris Vartanii*, its full name being *I. Vartanii White Pearl*. *I. Vartanii* belongs to the *reticulata* group, which comprises some of the daintiest and sweetest-scented of our winter flowers, and was sent to the late Sir Michael Foster by Dr. Vartan of Nazareth, after whom it was named. The variety *White Pearl* was sent to this country from Palestine in 1910 as a white form of *I. histrioides*. The flowers are pure white with the exception of a yellow bar on the falls.

THE ROSE GARDEN.

NOTES ON THE NEWER ROSES.

(Continued from page 625.)

SOME DECORATIVE VARIETIES.

I HAVE thought it advisable to qualify the heading of these notes. One can keep more or less closely in touch with new exhibition varieties, although that is getting increasingly difficult, but when one comes to ones that are not exhibition varieties, but embrace all the other sections, it is frankly impossible, and even the largest of our trade

of all the decorative or garden Roses is that known as the perpetual-flowering climbers; they are still very few and far between, and it is here that one may reasonably expect the greatest advance to be made in the near future. At the moment they do not number more than a dozen good varieties, and if one excludes the climbing sports, it would be difficult to name a really satisfactory dozen. To compare this with the selection that all the other sections afford shows at once the need and the truth of my statement. We look, then, to our raisers of new Roses with some hope that they will devote their attention to this class; the demand is here and pressing, only the supply is wanting. Very few of the non-climbers are perpetual flowering, the majority giving us an abundance of flowers, it is true, but spread over, say, six weeks instead of six months. In dealing with the climbers I shall not divide them into classes, but will take them alphabetically, indicating, as I come to them, the class to which the individual Rose belongs.

Ariel (Paul and Son, 1910), Climbing Polyantha.—This is a single-flowered Rose of excellent habit and much beauty. It has been described as a single-flowered "Tea Rambler." It has large flowers of a bright pink, with coppery buds, and a pretty bronze foliage that helps the general decorative effect. It has been given the Royal Horticultural Society's award of merit, and is a welcome addition to the singles. It retains its petals for a considerable time and is very free flowering.

Aviateur Bleriot (Fauque et Fils, 1910), *wichuraiana*.—A very pretty small or medium sized saffron yellow. Excellent foliage and habit. It has grown well with me this last season, and promises to be an acquisition to the yellow-flowering *wichuraianas*. It retains the colour of its flowers for a considerably longer period than the majority of the yellows.

Climbing Lady Ashtown (Bradley, 1910), Climbing Hybrid Tea.—This, if freely syringed to prevent mildew, promises to be an acquisition. My plant has grown all right and has given me some excellent flowers, especially early in the season. The type is now too well known to need description.

Climbing Richmond (Alex. Dickson and Sons, Limited, 1912), Climbing Hybrid Tea.—This, if fixed, should be particularly useful, both inside and out. As seen growing at Newtownards it was quite satisfactory.

Climbing Souv. de Pierre Notting (F. Cant and Co., 1912), Climbing Tea.—My plant of this has made growths 12 feet long this season. The blooms, one is inclined

to think, have less of the damaged or short outside petal; that is the only fault of the type. I suppose there is hardly a Rose that per plant gives us more flowers than *Souv. de Pierre Notting*, and if this sport will flower as freely—and I believe it will—then we have at once the best yellow climbing Rose.

HERBERT E. MOLYNEUX.

(To be continued.)



IRIS VARTANII WHITE PEARL, A RARE AND BEAUTIFUL WINTER-FLOWERING VARIETY. (Two-thirds natural size.)

growers have given up the task. I only propose in these notes to touch on those varieties that I have grown, or that have been specially recommended to me by reliable judges who have tested them. I shall deal, first of all, with the climbers or semi-climbers, then the dwarfs in their respective classes or sections. I think it will be generally admitted that the section which is the weakest

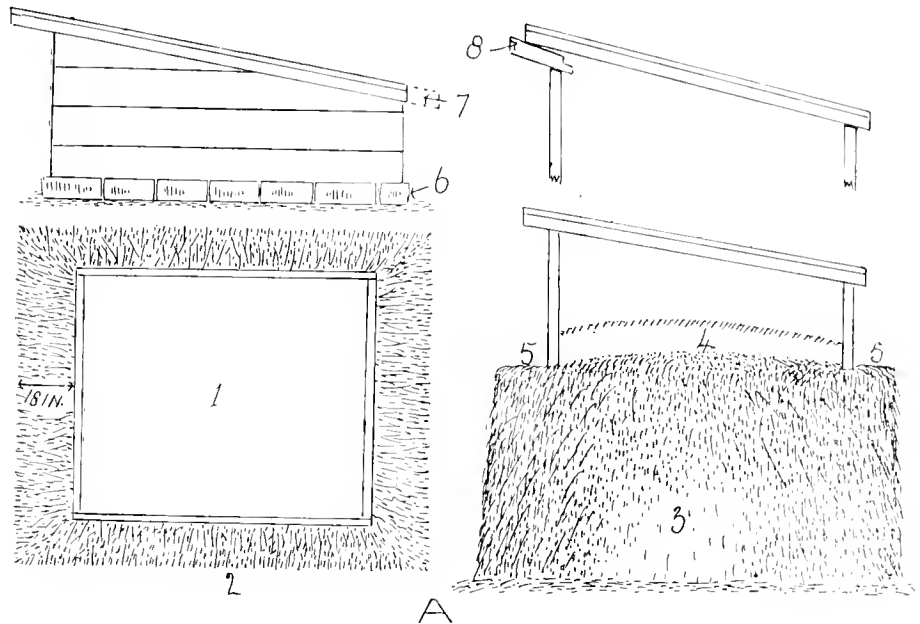
GARDENING FOR BEGINNERS.

HOTBEDS AND FRAMES FOR WINTER USE.

IN the depth of winter, when many buds are hard and dormant, the forcing of certain plants into new growth by means of heat from hotbeds is very interesting and absorbing work. Then there is the use of cold frames for the preservation of many kinds of plants which are required for the flower garden the following summer, and which would not withstand the winter weather if left entirely unprotected. Those cultivators who possess frames are enabled to grow many kinds of plants that it would be almost impossible to have without them. Then, the work of raising seedlings can be engaged in much earlier in the year than would be the case if the seeds had to be sown direct in unprotected borders.

The Material for Hotbeds.—This may consist of stable litter entirely, litter and tree leaves mixed, or leaves alone. The most satisfactory hotbeds are those constructed of stable litter and leaves, in the proportion of three parts of the former to one of the latter. Littery manure, taken direct from a heap which has heated and burned, will not answer our purpose, because the material will not engender heat a second time. The material must be collected fresh every day, and spread out in an open shed so that it cannot heat violently; moreover, it must be turned over every day. When sufficient has been collected, make up the bed quickly; do not half build it and then allow it to remain for several days, exposed, perhaps, to heavy rains. The bed must be considerably wider each way than the frame which is to be placed on it, because there is never much heat near the outer edges of the bed, and, furthermore, a rather wide bed forms a more secure base for the frame and its contents.

Fig. A.—No. 1 shows the frame on the bed (No. 2), which is wider than the frame by 18 inches on each side. The bed (No. 3) must be built up by well shaking



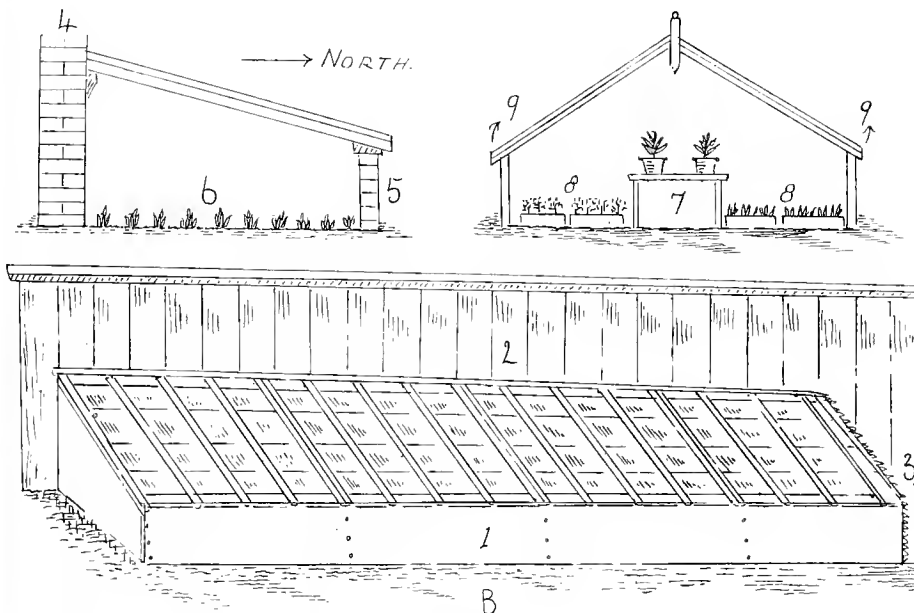
THE HOTBED MUST BE MADE LARGER THAN THE FRAME, AS SHOWN AT NOS. 2 AND 3.

out the litter and leaves, and thoroughly mixing them loosely as each layer is placed in position. As the material will settle down considerably, the bed should be quite 4 feet 6 inches high when the frame is placed on it. The centre of the bed (No. 4) must be higher than the other parts, as it will sink the most. Nos. 5, 5 show the margin of the hotbed beyond the frame. Such a bed is most useful on which to raise seedlings, for propagating cuttings, for the plunging of the pots when plants

have been recently repotted, and for raising early vegetables and salad plants. A cool, wooden frame lasts longer if placed on rows of bricks, as shown at No. 6. It is a mistake to draw up the glass light from the bottom so as to allow rain-water to drip in, as shown at No. 7. When ventilation is necessary, the light should be tilted at the top, as shown at No. 8.

Fig. B.—Many persons are unable to procure manure to build hotbeds, but nearly all possessors of gardens have walls or close fences facing south, and against such structures cheap frames may be placed, as shown at No. 1. The fence is shown at No. 2, and the frame, or frames, may be continued as shown at No. 3. It is really not necessary to have divisions in such frames if used for the raising of half-hardy annuals, vegetable or salad seedlings; but, if required, wooden divisions can easily be put in. A strong board, fastened to posts driven into the ground, will form the front of the frame, and two boards, on edge, the end. A 4-inch by 2½-inch rafter piece, screwed to the fence, will do to fasten the hinges of the frames to, the latter being lifted up in front. No. 4 shows a permanent wall 9 inches thick, and No. 5 a brick wall 4½ inches thick. A frame facing north is readily made, in the bed of which, as shown at No. 6, many kinds of young plants and seedlings which require cool treatment may be safely kept. The span-roofed frame is extremely useful, and should be placed in an open quarter on a bed of ashes, if possible. Where all the plants are small, a low stage may be fixed in the centre, as shown at No. 7, for the accommodation of pot plants; while others, and boxes containing cuttings and seedlings, should be placed at the sides, as shown at Nos. 8, 8. Both lights (Nos. 9, 9) may be raised at the same time, or one at a time, according to the direction of the wind.

G. G.



COLD FRAMES PLACED AGAINST WALLS OR FENCES ARE VERY USEFUL DURING THE WINTER AND EARLY SPRING.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Bedding Geraniums.—Some little care is necessary at this season, or the plants will quickly damp, and what may appear to be a healthy-rooted cutting will rot away at the level of the soil. Give a circulation of air whenever possible, and look the plants over carefully, removing any decayed foliage. Water will need to be very sparingly applied.

Border Carnations.—It is more than likely that with the wet state of the ground, if we get a spell of severe frosts the plants will be lifted. In that case make them firm at the base, and, whenever the state of the ground permits, loosen the soil between them and give a sprinkling of soot around them. If the cinder-ashes that were placed around the plants have been washed down, renew them, as they make the plants immune from attacks by slugs.

The Rock Garden.

Daphnes.—Few flowering shrubs are more highly appreciated on the rockery than one or two of the species of these fragrant shrubs, and their establishment is not always easily effected, thus making them the more valuable. *Daphne Mezereum* and its white variety are not difficult subjects for the bolder portion, but *D. blagayana* is a treasure worth any amount of trouble to establish. *D. Cneorum* and variety *majus* are both beautiful for flowering in April and May. In sheltered sites they may be planted out of pots now during open weather, but, if well established in pots, it will be preferable to allow them to remain and carefully transplant in early spring. They like a fairly damp position, but not waterlogged, as a sour soil is fatal. Peat or decayed leaf-mould and road sand should be incorporated freely, and an open position chosen for them.

The Shrubberies.

Variiegated Shrubs.—Providing, of course, that planting is discriminately carried out, many of our shrubberies and surroundings are considerably livened up by the use of deciduous and evergreen subjects bearing variegated foliage, and appended are a few that may be planted at this season with the confidence of their proving free-growing, valuable subjects. The golden and silver variegated forms of *Aralia chinensis*, *Cornus alba Spæthii* and *C. alba variegata*, *C. brachypoda variegata*, *C. Mas elegantissima aurea* and *C. M. variegata*, *Diervilla florida versicolor* and *D. f. variegata*, *Forsythia viridissima variegata*, *Hibiscus syriacus variegatus*, *Kerria japonica variegata*, *Acer Negundo variegata*, *Philadelphus coronarius aureo variegatus*, *Rhamnus alaternus variegatus*, *Ribes nigrum variegatum*, *Aucubas* (in variety), *Elaeagnus pungens variegata*, *Euonymus radicans variegata* (for the border), *Hollies* (in variety), *Ligustrums*, *Osmanthus* and the variegated forms of *Vinca*.

The Hardy Fruit Garden.

Strawberries.—During suitable weather the beds out of doors may have a mulching of well-decayed manure applied to them.

Standard Apples.—These and other trees, such as Pears and Plums, that have become well established, and especially those that bore good crops last year, will benefit by having a dressing of good farmyard manure applied to the surface. I prefer to add this and cover over with just a sprinkling of the surface soil.

Peaches and Nectarines.—The pruning of these fruits is far better deferred till the early spring, as the young growths are sometimes apt to die back. The work may then, of course, be completed before the buds are on the move. The planting of trees may yet be done when the weather permits, though I prefer planting earlier while the ground is warm. Dwarf trees are usually preferred, with standards to occupy the top part of the wall while the dwarf-trained trees are establishing themselves, when the standards should be removed entirely.

Plants Under Glass.

Begonia Gloire de Lorraine.—Endeavour to keep these plants as attractive as possible by carefully attending to their requirements as regards watering.

Be careful to avoid excess and give a little stimulant, avoiding the use of strong manures, which cause the flowers to pass quickly. Keep the flowers picked off and any tying-up seen to. These plants are wonderfully pretty if suspended from the roof of a warm house in baskets. The female flowers are interesting to watch for, and are usually terminal.

Amaryllis.—A small portion of the bulbs may be top-dressed or potted and started for flowering in another six weeks or so. These will do much better if the pots can be plunged in a little bottom-heat and kept damped over.

Chrysanthemums.—Cuttings of the plants that require a long season of growth for producing large blooms will very soon have to be inserted. Select those that come away from the rootstock for preference and choose sturdy stock. Little heat will be required; in fact, they may be rooted in a cold frame.

Fruits Under Glass.

The Starting of Houses.—As the houses and trees are got in readiness, until the time for starting into growth arrives they should be kept as freely ventilated as possible. Peach trees should, before they come into bloom, be fumigated so as to destroy any aphid that may be present, as this cannot be done while in flower without the possibility of injuring them.

Early Vines.—These require a little higher temperature than Peaches, and once or twice a day, as the weather allows, the rods should be damped over. By this I mean merely spraying, which will induce them to break more evenly, and for convenience and to encourage a more even break, the rods may be brought down and tied horizontally together, as the temperature is more even and it prevents a rush of sap to the extreme height, which occurs when they are tied up.

The Kitchen Garden.

Preparation of Ground.—While the ground is hard, continue to wheel manure on to the various plots ready for digging or trenching, and proceed with the work on heavy land as soon as possible, leaving the surface in a rough state so that the weather may act upon it. Where there is a natural deficiency of lime, strew some over the surface. Wood-ashes and other burnt garden refuse may be similarly employed, with the best effect.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Bad-Weather Occupations.—Iron stakes may be repainted, labels made and written on, Dahlia and Hollyhock stakes repointed and repainted, and wooden stakes that are much decayed at the points split and used again for lower-growing plants. Thick Bamboo canes split quite easily and are suitable for lighter-growing material. Assort them and tie them in bundles to be ready for summer.

Split Laths.—Plasterer's laths split in two or three and the edges trimmed and each pointed make durable stakes. They are not at all expensive, and a clever hand with his knife can manufacture a very large number in the course of a few bad-weather days. The ends may be charred, or at least be painted.

Seed Cleaning.—This is another necessary occupation which is best overtaken when outdoor labour is impossible. Bags with names ready written on should be prepared, and each variety cleaned and sealed before another is taken in hand. Carnation and Gladiolus seeds I keep in their seed-vessels till the time of sowing, but most others can be cleaned now and got ready for sowing.

The Vegetable Garden.

Ground Work.—If the greater portion of vacant ground has been cultivated, manure can be wheeled on during hard frosts and spread ready for digging in as opportunity and weather permit. I hesitate to cultivate ground while wet or covered with snow; but many who have still most of their garden undug and untrenched have no option but to proceed when they have time.

Composts.—All the accumulated rubbish of the past year should be turned, broken up and left in a neat heap for another year, and older material that has become decayed enough may be wheeled on to quarters yet to be trenched, to be buried well beneath the surface. It is of greater utility in heavy soils, where it may be lavishly used, than on those of a light nature.

Scotch Kale.—This vegetable is of great value in March and April. It is hardiest when planted on poor, hard soil, which may now, or soon, be enriched by means of a dressing of manure run along between the rows, to be forked in either now or later. Very often this vegetable is cut in a wasteful manner, the whole head being removed. A larger quantity of usable material is secured by cutting the leaves, one or two at a time, from a plant. These make an excellent substitute for Spinach, or may be cooked as a dish on their merits.

The Plant-Houses.

Hydrangeas.—Young plants should have been rested sufficiently to force for early blooming. They stand and appreciate a high, moist temperature, but till root-action recommences do not need much water at the root. Only the strongest plants with prominent buds should be selected for this purpose.

Hippeastrums.—If these are wanted early, a portion of the stock should be put into a house with a temperature of 55° to 60°. They will need no water at the root, but may be placed under the stages or anywhere till the points of the flower-scapes have pushed a little, when a higher temperature with moisture will cause the flower-stems to elongate rapidly.

Shrubs.—Such easy-to-force plants as Flowering Currants and *Rhododendron præcox* may be introduced to a structure with a medium temperature, in which they can be placed under stages or in any odd corner till the buds are at the breaking-point. Moisture is one of the essentials, and, if frequently syringed, water at the root will be seldom required.

Roses.—Those growing in borders should now be pruned. They are usually climbing varieties so cultivated, such as *Niphetos* and *Reine Marie Henriette*, and these must be distinguished, the last named requiring the few shoots that were allowed to mature to be reduced to strong wood capable of producing blooms. The first named, on the other hand, needs only to be carefully thinned. Tie the shoots out so that there is sufficient space for the young growths to fill without overcrowding. The addition of well-enriched compost, with a little dried blood added, will help them to break strongly.

Hardy Fruits.

Scale.—On Pear trees scale insects sometimes effect a lodgment, and it is difficult to exterminate those which hibernate out of the way close to walls. I have painted a badly-infested tree with sweet oil, omitting the buds when painting, with the best results. Trees only partially affected may be sprayed, and where Plum trees are attacked, spraying would be best for these too.

Apple Trees in Grass.—These should not be forgotten when dispensing the material from the compost and manure heaps. Sometimes I apply the manure, sometimes the compost, and both have a good effect in promoting a vigorous growth and increasing the bulk of fruit. Remains of wood fires are also valuable, but these are reserved for Apricots on a grass-covered border and for dessert Pears. All may be dressed with these materials at this time of year, spreading them nicely all over the surfaces so that every part may have an equal share and that the materials may be well weathered.

Raspberries.—If not done up for the year in autumn, these may now be taken in hand. Usually ours are finished, with the exception of cutting off the weakly points, which may be done now. If cow-manure can be had, it affords one of the best stimulants for this crop, but it should lie nine to twelve months before using. Some object to digging between the rows and stools of Raspberries. Personally I have no objection, but the spades are not used too near the plants, when deep digging results in root-pruning and the production of new roots into renewed soil annually.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

TWO OF THE FIRST ENGLISH FLOWER BOOKS. THEIR AUTHORS AND CONTENTS.

PARKINSON'S "Paradisus" is usually alluded to as the first work of any consequence in the English language in which the wants of the flower garden are placed first and foremost. This is undoubtedly correct if the intention of the author is the only consideration; but it is not wholly so if we look at the materialised expression of his mind in the book which he produced. It is impossible to entirely throw off the spirit of a long-accustomed environment all at once. Parkinson was no exception to this rule; so while we recognise the voice of the "Paradisus" to be that of the garden, the form is undoubtedly that of the herbal. Personally, I would describe this famous folio as the book of a transition period between the supremacy of the "physic" and the coming of the flower garden. The first half of the seventeenth century was the chrysalis stage, when the ability for healing was being discarded as the first and only desideratum of its occupants. Rea's "Flora seu de Florum Cultura" and Gilbert's "Florists' Vade Mecum" performed a valuable office at the first expanding of the new wings of beauty and pleasure which were henceforth to be distinctive marks of the English garden. It is this that gives them their great interest and historical value; for they mark the beginnings of a marvellous development, of which the end is still far out of sight.

Those who only know the exteriors of these two books may possibly think that I have coupled together two very unequal yoke fellows (one is a small folio and the other only a 12mo.). Size, however, is not always everything. It is not so here. There was work for both to do, and the numerous editions through which they passed clearly shows us that they did it, and that it was much appreciated. Moreover, in one sense they were not really two. The "Vade Mecum" was but the continuation of the older and larger "Flora," and breathed the self-same spirit, for its author had lived for some considerable time with John Rea, whose only daughter he had married, and through whom, after his father-in-law's death, he had inherited the garden in which his experience had been gained. The younger man alludes to the elder as the foremost florist of his time, whose collection of Tulips was unique, and who possessed among other rarities for which he was justly and widely known some of the finest July-flowers and Bears'-ears then in existence. His "long converse" with such an one gave him knowledge and skill; his good fortune in having such a garden as an object-lesson gave him practical experience; while his own early training and inclination enabled him to profit by all he had heard and seen:

If Jackanapes on Giant's shoulders be,
He hath no eyes, or else can farther see.

In this spirit he sends out two years after his father-in-law's death what he calls his "Pocket Companion to all Lovers of Flowers and their Propagation."

After this preamble I pass on to record what is known of the lives of these two old-world gardeners, and then, having done this, I hope I may take my readers with me when next week and the week following we turn over some of the pages of these two most interesting relics of the past—

the "Flora seu de Florum Cultura" of Rea and the "Florists' Vade Mecum" of Gilbert. But little is known of the former beyond what we can gather from his own writings. We have no knowledge of his birth or parentage. He seems to have lived the greater part of his life at Kinlet, near Bewdley in Worcestershire, a rural district, not naturally such an one as would be chosen for a garden, and which, in addition to its unkindliness, was very much out of the world. According to the notice in the "Dictionary of National Biography," he followed the calling of a nursery gardener; but I am disposed to doubt this because of certain expressions which he uses in his introductory letters, which, after the fashion of the time, are inserted in his book. In the preface to the reader in the first edition (1665) he says: "Forty years are now completed since first I began to be a Planter and to dedicate more time than I could well have spared for Diversion to that lovely Recreation"; and, again, that he finds himself in old age more happy in this "retired solitude than in all the bustles and busie employments of my passed days." To Sir Thomas Hanmer he writes that but for his encouragement and help he would have been "less knowing in this delight," and that he would "long since have grown out of love with his garden." He certainly planned the gardens at Gerard's Bromley for Charles, the fourth Baron Gerard, but I would suggest that he did this more as a friend than as a professional. It was to this man that he dedicates the first edition of his "Flora," and to the successor in the title, Digby, the second in 1676. Rea died in November, 1681, leaving his holding to his daughter Minerva, who was then the wife of Samuel Gilbert, and his collection of Tulips to one Thomas Tassell of Wyche. As far as is known, he was a one-book man, for his "Flora" in which he recorded his life experience as a "Planter" and florist is the only work of his of which there is any record. JOSEPH JACOB.

(To be continued.)

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

CARNATIONS FAILING (*Wimborne*).—The example sent had been bored by a wireworm, the central part of the stem having been cleared out entirely. Had it not failed from that cause, it would probably have done so owing to the poor attempt at layering evidenced by the example sent. Contrary to custom, the nib had been formed on the upper surface of the layer instead of underneath, while its feather-edged tip or point would almost preclude the possibility of its rooting. Moreover, the cut was little more than a quarter of an inch long instead of fully 1 inch, beginning immediately at the base of one joint and extending to the next. Such imperfect work may be responsible for more failures than the pest to which we have referred.

CARNATIONS AND SOIL (*E. G. F.*).—The plant you submit has been attacked by stem ceworm, which, in the existing state of things, is likely to be transmitted to the young stock. Nothing short of a complete change of stock and soil is calculated to be of much service.

HERBACEOUS BORDER (*Lynley*).—There are many plants which do quite well over chalk, the presence of which is not so important as the depth of soil available. If you will give us an idea as to the depth of soil and the size of the border you have in mind, we shall be in a position to help you. It is the width of the border that is material, as obviously the stately plants suited to a 12-foot-wide border would be out of place in one of 4 feet or 5 feet in width.

DARK PURPLE CARPETING PLANT (*P. C.*).—*Viola cornuta atropurpurea* is the plant you require. It is good in colour, an excellent carpeter of the soil, albeit a little loose towards the end of the year, and a great bloomer. You could plant it now, a few weeks hence, or in spring, say, March, if a late summer display is most desired. Even when not in flower, the fresh green of its foliage is a great gain. Happily, too, the plant is a good perennial and may go on for two or three seasons in your district with annual cutting and mulching. You should write to Messrs. Gunn, Olton, near Birmingham, who specialise in the plant.

WALLFLOWERS LOOSE IN BEDS (*J. L. S.*).—The Wallflower is a sparse-rooting subject, and this, in conjunction with your heavy and wet soil, is largely responsible for the trouble. It is highly probable, too, that owing to the wetness of the soil the original planting was insufficiently firmly done, or the plants insufficiently deeply planted to get a firm hold of the soil. What usually happens in the case of wet soils is that the plant is swayed by wind and storm, and a socket-like, watertight hole resulting, the plant not infrequently perishes from frost, which gets into direct touch with the plant. In all the circumstances we incline to the opinion that the planting is chiefly at fault. We say this advisedly, inasmuch as for years we have had to contend with one of the worst types of clay soil, and the planting, too, of large numbers of these same plants. If the soil was abnormally wet, the planting was done from a plank, having first strewed the surface of the bed with light material, Cocoanut fibre or old potting material. The method of planting was that of the small hand-fork for each plant, applying finger and thumb pressure to each, the lighter material being worked close to the plants meanwhile. You should do likewise. To keep the surface soil "loose and open" does not imply that the plant should be at liberty to indulge in calisthenic exercises. All plants should have the soil so pressed about their stems that they are held firmly in position, and water and air in contact directly excluded thereby.

TREES AND SHRUBS.

HEDGE OF VERONICA (*W. H.*).—The best time to cut your Veronica hedge back would be April. If cut back now it would look very ugly all the winter and some of the branches would probably die, whereas if the work is deferred until April new shoots will appear almost at once and cover up the old cuts. In the event of the weather being very dry when the work is done, you would do well to syringe the plants twice a day until the new shoots put in an appearance.

TO REDUCE THE SIZE OF AN OLD HOLLY HEDGE (*H. E. C.*).—It is not advisable to cut your Holly hedge back severely at the present time, but you may safely cut it back by half next April. If cut back now no new wood can be made for at least six months, but if the work is done in April new shoots will appear almost at once. The sides should be cut in as well as the top, and if the centre of the hedge is choked with leaves or dead wood, such should be removed. A good hosing would have beneficial results, for it would wash away any accumulation of dust or dirt from the bark. It would not be advisable to cut out the old stumps, for that would tend to weaken the hedge and cause gaps. You will need to be careful for several years with the pruning, for if the top shoots are not kept severely checked they will rob the side shoots and the hedge will not thicken well. Should the weather be dry when the work is done, a good syringing twice a day for a few weeks would help in the production of new shoots. A surface-dressing of well-rotted manure would also do good. If there are any very thin places in the hedge you may be able to insert a young plant or two here and there. April is an excellent time for planting Hollies.

FRUIT GARDEN.

MUSCAT GRAPES GONE WRONG (*G. C. H.*).—A too cold, damp atmosphere at night when the Grapes are dead ripe will bring about shanking, especially if the Vines had received a heavy watering a day or a few days before. It is evident that the Vines had a chill or set-back from some cause, and therefore the best thing you can do is to endeavour to bring the Vines back to good health again. To this end we would lift the roots in the inside border to within 18 inches of the front wall. To do this you would have to open a trench at the bottom of the border furthest from the wall. (The depth of the trench will depend on how deep the roots are; you must get to the bottom of them.) Remove all the old soil, and be careful to preserve intact all the roots you come across. Replant carefully, after cutting back the cankered and lifeless roots, in fresh, best Vine soil. The outside border should be served in the same way next year. By doing this you will obtain a nice healthy body of roots, which will carry your old Vines successfully through many years of good cropping again.

THE GREENHOUSE.

PELARGONIUMS (*Amateur*).—In order to obtain the best results from Pelargoniums in the winter, they should be firmly potted in some good soil, mainly consisting of loam, lightened by a little leaf-mould and sand. When the plants in the pots are well furnished with roots, an occasional stimulant may be given, but care must be taken that it is not too strong. Stood in a sunny spot and not overcrowded, the plants will make good, short-jointed wood, such as will flower well in the winter. The flower-buds should be picked off when the plants are taken into the greenhouse, where a light, buoyant atmosphere should be maintained.

NERIUM OLEANDER (*H. R.*).—In this country the Oleander needs the protection of a greenhouse, or, at all events, to be so situated that it is quite safe from frost. The Oleander is naturally of a loose, Willow-like habit of growth, and if the leading shoots are frequently pinched in order to ensure a neat bush, it will not flower in a satisfactory manner. It needs to be potted in ordinary compost, such as a mixture of loam, leaf-mould and sand; and the rooted sucker which you removed from the parent plant would have been all the better if leaf-mould or peat instead of manure had formed one of the ingredients of the potting compost. As your plant is in a sorry plight, we should advise you to wait until the end of February or the early part of March, and then report it, taking away as much of the old soil as can be done without injury to the roots.

THE COST OF BUILDING A GREENHOUSE (*Old Gardener*).—The cost of the structure, not including the brickwork, would be about fifteen shillings per foot run of house. If there are no side-lights, the cost would be about ten shillings per foot run. You do not state how high the brick walls would be. You can easily ascertain the cost of the walls locally. The woodwork should be of best red deal, well seasoned; 21oz. glass for the roof, 16oz. for the sides, bottom putty, no top putty, the squares of glass being held in position by sprigs. The wood must be primed, and have one coat of paint before glazing and two coats after glazing. The cost of boiler, flow and return 4-inch hot-water pipes, expansion box, air pipes, rubber joint fittings, stack pipe and stoking tools would be about eight pounds ten shillings.

ROSE GARDEN.

SAMPLE OF SOIL (*Appreciative*).—The soil sent is fairly good for Roses, but it would be much improved if you could add some pulverised clay, to give it more body, and it will need to be well enriched with good, well-decayed manure. Add some basic slag to the subsoil when trenching, and as you plant your Roses give each plant a handful of bone meal.

ROSE SPORT (*Rosarian*).—The possibility of your having to leave England is a very great drawback to success with your plant. In such a long journey as that to Australia in the spring, you would most certainly lose the tip of the shoot; but we should say the Rose would give the sport, even though the tip of the shoot died back. Generally, the sport will come true from any eye springing from the same growth. The best plan, now that you have missed budding it, would be to get your local nurseryman to graft a plant for you. Then dig the plant up at once and put it into a small pot. If you go to Australia you could pack the tree in the pot in a box, and you might be successful with it. A few Briars culled from the hedges now would enable you to bud the sport next summer, providing you do not leave England.

DOROTHY PERKINS AS A POT ROSE (*R. W. D.*).—You should have put the plants into a greenhouse and kept them growing after you had cut them back. The best way to handle such Roses is to reduce the old growths to about one or two, and then place the plants in a structure where a nice growing atmosphere can be maintained, and a temperature of about fifty-five degrees by night. Plenty of atmospheric moisture, and also moisture to the roots, will soon induce new growths, which by August would be some 15 feet to 20 feet long. The plants are by that time ready to place outdoors. Tie the growths to tall canes in an upright position, and stand the plants upon ashes in a sunny spot, preferably against a greenhouse. They will ripen off well, and in November may be placed in a cold house. When you wish to start them, twine the growths around canes in a pyramidal or columnar form, or any shape you like, and give them gentle heat at first and plenty of air. About fourteen weeks should be allowed from the starting to the blooming; but as soon as the buds show colour, remove the plants to a cool house, where development will be slower, but the colour much improved. During the growing period abundance of water is needed, also frequent syringings to keep down red spider.

MISCELLANEOUS.

CELERY LEAF BLIGHT (*J. S.*).—You are quite right in taking the fungus on Celery to be different from Cercospora. In our experience—and we have examined hundreds of diseased Celery plants—Cercospora is now rarely found, the common cause being Septoria petroselinii var. Apil, the fungus you describe so well. You will find some descriptions of Septorias in "Cooke's Microscopic Fungi." The Perithecia are not like those of the Erysiphe, and the fungus itself grows *inside* the leaf, not *outside*. It is difficult to find a book giving recognisable descriptions of all the fungi likely to be met with, but perhaps Massee's "Diseases of Cultivated Plants" would meet your need.

Saccard's, which contains descriptions of all known fungi, is in twenty large volumes, and costs about eighty pounds.

NAMES OF PLANTS.—*J. B.*—*Tecoma radicans* (the Trumpet Flower).

NAMES OF FRUIT.—*A. V. H.*—Apples: 1, Lady Henniker; 2, Wellington; 3, Norfolk Beautin. Pears: 1, Winter Nellis; 2, Brown Beauté; 3, Baronne de Melé.

BOOKS.

Tulips.*—As an editorial footnote to the preface tells us, this is the first book entirely devoted to Tulips published in English. I hope it is but a forerunner, and that before we are much older the long-needed monograph of the genus will issue from the busy brain of our own countryman who, having completed his work on the Iris genus, is now turning his attention to Tulipa. But a monograph on botanical lines only will still leave a void, for as a garden flower the Tulip possesses a history and literature as sensational and interesting as any plant. The compression necessary to keep this new volume of the "Present-Day Gardening Series" uniform with its brethren has, to my mind, stamped it with the nature of a *hors d'œuvre*, to whet our appetites for the banquet we expect from the hand of the author, whose love of the Tulip for its own beauty and his knowledge of its past history, combined with the possession of a singularly rich collection of books and papers relating to it, all point so clearly to his being the right man to prepare the feast. So far as the book goes it is excellent, and if the writing of it has stimulated his desire to go further, we may forgive its brevity.

The late-flowering Tulips are gaining rapidly in favour. The gardening public is at last beginning to realise their beauty and true economy. Much less frequently than formerly, when I speak of my May heyday of Tulips, do I hear it said: "Tulips now? Why, ours have been over a long time."

Growing Tulips still means for a few poor benighted souls the forcing of prim little Duc Van Thols. How I do dislike their mean proportions and crude colours, their anæmic leaves and precocious appearances on Christmas dinner-tables, caricatures as they are of the real thing. Other few are still content with a few pots or bedded-out designs of early Tulips, both double and single, dumpy and stiff though many of them be. It is such an extravagant form of gardening, too, for very seldom do any of them find an English garden a sufficiently congenial home to induce them to settle down and produce a good flowering bulb for the next season, and Dutch-grown bulbs must be bought to renew them. The advent of the Darwins and the revival of the Cottage Tulips have taught us that instead of purchasing fresh stocks each season, anyone with patience for reasonable care, and a soil richer than cinders and less solid than blue lias, can confidently look for an annual increase of their bulbs. Not only in Europe, but in America and New Zealand there is a yearly increasing demand for May-flowering Tulips. This has produced the sudden rise in prices mentioned in the introductory chapter; but to counter-balance this evil for the planter, the author confesses that it has induced him to devote a larger space to their consideration, and prophesies that they will prove to be the twentieth century Tulips.

The book is well thought out and planned. Its twenty-two chapters vary much in length, but each one is devoted to a single aspect of the Tulip. This tends to clearness and makes the book valuable for quick reference. Chapter II., on "Chronology

* "Tulips," by the Rev. Joseph Jacob; price 1s. 6d. net.

and Bibliography," is a model of the compression of important information into a small compass.

In a few instances one would like to have the references to the authorities given, e.g., the first notices of double and of Parrot Tulips.

Chapter III. is a delightfully clear account of the Tulip mania of the seventeenth century; the fourth, a vocabulary of the technical terms that have grown up among the cultivators of the flower.

Then nine chapters deal with various divisions of Tulips, such as Early, Double, Species, Florist, &c. The useful chapters on cultivation under glass and in the open; on colour planning, propagation and diseases, are full of practical hints and warnings—the fruits of years of personal experience—and would alone justify the publication of the book. In addition to the carefully compiled lists of the best sorts, given in the chapters devoted to the divisions, there is one on the selection of varieties for various uses that seems very useful, especially for the beginner, to whom it should be a saving of expense and disappointment if carefully studied and followed.

As it is customary in a notice of this kind to hunt out and pillory misprints or mistakes, I have searched carefully, but find little to report. I hope to see a second edition, and in it a further simplification in the vocabulary of the definition of bizarre and byblœmen. At present, to the uninitiated it reads as though *T. mauriana* or any self yellow Tulip might be a bizarre, in that they possess yellow bases. Under the heading "Roses" the mention of the markings being upon a white ground makes the matter clear for all.

Under "Italian," on page 20, I should like to see "A generic name for that group of species," &c., altered to "A name for that group of species found," &c. On page 27 Proserpine is mentioned twice, first among the red and cerise forms, and again among the various. Good though it be, this is unfair and, I feel sure, unintentional favouritism. Page 48: Zwanenberg Nurseries have acquired a new name in the compositor's hands, I fancy. Page 49: Cramoisi Brilliant has changed an "i" for an "e." *T. elegans* is in its right place on page 36, among the Cottage varieties, and, I believe, appears wrongly among the species (even qualified, as it is, as a doubtful one) on page 52, for I have been told by a great Dutch authority that *elegans*, *e. alba*, *retroflexa* and *fulgens* all appeared in the same seed-bed and were of garden origin. I am sorry to find no praise of *fulgens* in the book; the tallest of all and of so fine a crimson, I rank it as one of the very best for massing in borders. It has a very fine effect among Iris foliage, between groups of late-flowering ones such as *I. ochroleuca* and *Monnieri*, it is very useful to give colour before they are out.

In lines 11 and 12 on page 63 the little word "an" has played general post and needs another move; and winter has usurped the place of summer on page 78 as relentlessly as it often does in an English June.

The coloured plates are marvels of beauty to find in a book of such low price. Especially excellent are No. VIII., of *Euterpe* and *Frans Hals*, and No. III., of *Suzon* and *Farncombe Sanders*. But I must grumble at the arrangement of No. VII., in which Sir Harry utterly dwarfs the really taller *Solfatare*. The colouring is delightful in all except No. V., where the orange shades of *Prince of Austria* and *Fred Moore* are not done full justice; but, after all, it may be they suffer from being of so difficult a colour to reproduce and from the charming delicacy of effect in the other plates. E. A. BOWLES.

THE GARDEN.

No. 2145.—VOL. LXXVI.

DECEMBER 28, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

NOTES OF THE WEEK.

General Index to this Volume.—With this issue, which completes Vol. LXXVI., we are presenting a general index, together with a title-page, suitable for binding with the whole of the numbers published during 1912. Following our usual custom, we shall next week present, in addition to the coloured plate, an almanack, giving the dates of all the principal horticultural shows in the country. That number will be specially enlarged, and contain numerous articles by the best authorities on the subject.

Protecting Roses from Frost.—During the next few weeks we may expect very severe frosts, and we would remind readers that the more tender of the Tea Roses, as well as newly-planted Hybrid Teas, should have some protection. Where the soil is friable enough, this may be heaped, conical fashion, well up the stems. On very heavy soil, coal-ashes, or even fine porous soil prepared for the purpose, may be employed. We have found either of these preferable to straw or manure.

A Good Christmas Rose.—*Helleborus niger* major, the equivalent of the Bath variety, is, perhaps, the most reliable of the Christmas Roses generally in point of time; it is usually with us at this season. This year the equally good *Mme. Fourcade* is with us, too, and if a little less pure than the first, it is bolder and showier as a garden plant. The twain, however, are so precious that there is room for both, and in some quantity, too. A few flowers with shrubs in a bowl make a rather pretty informal display, and the flowers endure so well and so long.

The Rev. W. Wilks.—It is interesting to note that when the annual general meeting of the Royal Horticultural Society is held in February next, the Rev. W. Wilks will have acted as secretary to the society for twenty-five years. At the time of his appointment the society had just left South Kensington and was in very low water, but, owing in no small measure to the efforts of Mr. Wilks, it has since then forged ahead and is now in a most flourishing condition. We would suggest that the annual general meeting, to which we have referred, would be a fitting occasion to make some recognition of the invaluable services he has rendered the society, and we would like to know that the Council had some scheme in hand with this object in view.

Lilies in Flower.—Not so very many years ago it would have been looked upon as little short of a miracle to see Lilies of different kinds in flower at Christmas, but now they may be had in great numbers at this season. The silvery trumpets of *Lilium longiflorum* are everywhere in evidence, and besides these there are the white and coloured

forms of *L. speciosum*, the golden-rayed *L. auratum*, and, occasionally, a few flowers of the Japanese form of *L. tigrinum*. All this is brought about by the retarding of the bulbs in cold chambers, a practice that has now been in vogue for about ten years. After being retarded beyond their usual season of blooming, the bulbs need only to be placed under conditions favourable to growth, when they will start away at once.

Begonia Glory of Cincinnati.—This is a very fine form of the *Gloire de Lorraine* section, forming as it does a bolder plant, with larger flowers than those of the type. Besides this, the leaves have more of the peltate character common to the typical *Begonia socotrana* than has *Gloire de Lorraine* itself. The flowers hold themselves in a prominent position, so that, viewed in a mass, there is a far greater display of blossoms than from a corresponding number of the ordinary *Gloire de Lorraine*. As indicated by its name, this *Begonia* was raised in the United States of America. It was last winter given an award of merit by the Royal Horticultural Society. It is a good winter variety for the greenhouse.

Plants Flowering Out of Season.—Last week we drew attention to the fact that Lenten Roses and a number of other plants were flowering freely. Since then we have seen in the London district flowers of the *Woodruff*, *Adonis anurensis*, *Crocus Imperati*, *Hamamelis arborea*, *Viola gracilis*, *Pyrus japonica*, *Double Arabis*, *Potentilla rupestris*, *Aubrietias*, *Phlox setacea*, *Polygala Chamæbuxus*, *Daphne Mezereum*, *Saxifraga Fernandii-Coburgii*, *Ionopodium acaule*, *Veronica prostrata*, *Centaurea montana*, *Viola Bullion* and *Anemone blanda*. The last named, though not tully open, is sufficiently forward to enable the colour of the buds to be seen. On the next page we print a letter from Mr. F. H. Chapman, in which he gives a list of plants flowering just now in his garden at Rye, Sussex.

New Sources of Paper.—The current issue of the *Kew Bulletin* contains some particularly interesting details of new sources of paper. The most important of these is the tropical plant known as *Hedychium coronarium*, examples of which can be seen in House No. 15 at Kew. Messrs. Clayton, Beadie and Stevens of London have experimented largely with this plant, and find that it yields paper of greater tensile strength than the strongest Manila papers produced. Its elasticity and folding qualities are said to be exceptional, and it can be made to bear ink and possess parchment qualities without sizing or other special treatment. *Amomum hemisphericum*, *Alpinia nutans* and *Marram Grass*, *Ammophila arenaria*, are other plants which have been found to yield paper. The last named is a native of Great Britain, and is largely employed as a sand-binder on our coasts.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Oriental Trees in Southern Scotland.—The Almond tree has fruited in my garden this season for the first time for many years, and some of its fruits, very rarely seen in Scotland, have developed to an almost abnormal size. *Magnolia Watsoni*, a beautiful and intensely fragrant native of Japan (which was originally contributed to my interesting collection of Eastern trees by Sir Harry J. Veitch), after blooming profusely in June and part of July, flowered again in October like a floral after-thought of Nature.—(REV.) DAVID R. WILLIAMSON, *Kirkmaiden Manse, Wigtownshire, N.B.*

The Mild Winter.—On looking round the garden to-day (December 15) I find *Galanthus cilicicus* well out, also a particularly fine form of *G. Whittalii*. *Eranthis hyemalis* has been in flower, in a sheltered spot, for quite ten days, as has also *Cyclamen ibericum*. Primroses are peeping out all over the place, while *Iris Tauri* opened yesterday in a cold house. This is, surely, phenomenally early, especially as the bulbs are home-grown, not imported. Ever since the beginning of November, too, *Iris stylosa* has given bounteous bloom. It is a puzzling mystery to me that I see this beautiful and welcome flower in so few gardens; everybody should try to grow it.—F. HERBERT CHAPMAN.

Camellias in the Open in South-West Scotland.—There are a few gardens in the South-West of Scotland in which the Camellia does well out of doors, and among these may be mentioned Mr. Robinson-Douglas' garden at Orchardton, Castle Douglas, and Captain Hope's garden at St. Mary's Isle, Kirkcudbright. Both are in sheltered, early districts by the sea. These Camellias seem to require to be established in the open for some time before they flower, and to have them really beautiful they must have shelter. The writer knew of old plants in an exposed nursery which gave flowers for years, but which were too exposed to do any real good. These were a few miles from the sea.—S. ARNOTT.

Greenhouse Eupatoriums.—The different greenhouse Eupatoriums cannot be regarded as a showy class of plants, yet some of them are decidedly pretty, and what is of considerable importance is the fact that they flower during the late autumn and winter months. There are several kinds, of which the best known are *E. riparium* and *E. weinmannianum*, also met with as *E. odoratissimum*, but from my point of view (though, of course, opinions vary) the best of all of this section of Eupatoriums is that generally grown under the name of *E. petiolare*, but of which the correct one is said to be *E. Purpusi monticola*. This is of free growth, and will form a good bushy plant, anything from 2 feet to 4 feet in height. The flower-heads, which are over half an inch across, are somewhat suggestive of Double Daisies. They are, when first expanded, of a pale bluish tint, but become whiter afterwards. These flower-heads are borne in loose corymbs, and from these a succession is kept up for some time. For use in a cut state *E. petiolare* is of considerable service, as the neat, pretty flowers well bear close inspection, and they last well in water. Added to this they have a pleasing but by no means powerful fragrance. For the New Year the dwarf-growing *E. vernale* comes in. The flowers of this are white. Later

comes the purplish lavender-coloured *E. ianthum* and the deeper-tinted *E. atrorubens*.—H. P.

Snow and the Germination of Seeds.—The letter of your correspondent Mr. S. Arnott on page 622, issue December 14, is very interesting. Undoubtedly the soil is warmer under a covering of snow than when exposed to the keen winds which we often experience in the early part of spring; moreover, the temperature of the soil under the snow is more uniform, and seeds which have, previously to the fall of snow, begun to germinate ever so slightly continue to progress, while those in the uncovered borders are checked, and in the entire absence of snow and while the weather alternates between severe cold and mildness germination is checked. Farmers generally welcome a covering of snow for their Wheat while severe weather prevails, as the plants always make rapid progress when the thaw comes. We know how efficacious a covering of snow is in protecting plants during a frosty spell. Seeds

the rate of half an ounce to a little less than one gallon of water. Use the pure monosulphide.—GEORGE GARNER.

The Tulip Tree (*Liriodendron tulipiferum*).—This is one of the largest and most distinct exotic trees grown in this country. It is said to have been introduced during the seventeenth century. The Tulip Tree must have been planted fairly frequently in bygone days, as fine specimens 70 feet to 100 feet or a little more are by no means uncommon, scattered here and there about the country. It belongs to the Natural Order Magnoliaceæ. In North America, the native home of the tree, it is known as the Saddle Tree, the shape of the leaves somewhat resembling a saddle. The flower resembles the Tulip; hence the popular name of Tulip Tree. In summer the leaves have a fresh green appearance, changing in autumn to a lovely golden yellow hue. The flowers, which appear during June and July, are light green in colour, with a broad orange band



A FLOWERING SPRAY OF THE TULIP TREE, WHICH IS WELL ADAPTED FOR PLANTING NOW AS AN ISOLATED SPECIMEN.

germinate more quickly under any light covering than in an entirely uncovered border.—B.

Injury from Chrysanthemum Rust.—I have never heard anyone say that the rust on Chrysanthemum leaves was injurious to the health of persons working among them. The plants grown by your correspondent Mr. Frank W. Sargeant, referred to on page 622, issue December 14, must have been very badly affected. The rust is a fungus growth, and may be very poisonous. Your correspondent gives medical authority for the statement that he and his foreman were suffering from blood-poisoning; but unless the skin was broken I fail to see how the rust could have done much harm. Furthermore, much depends upon the state of the blood and general health. Rust on Chrysanthemum leaves should never be allowed to affect the plants after the cutting stage. It is quite easy to exterminate it by sponging or dipping the young plants in a solution of sulphide of potassium at

encircling the bottom of the flower near the base. The blooms of the spray illustrated are 2 inches deep and 3 inches across. There are six petals and three reflexed light green sepals, between thirty and forty anthers, and a thickened spike-like ovary in the centre. Imported seeds form the readiest means of increase, for though trees in this country produce apparently good seeds, I have not heard of any success in raising them. The Tulip Tree has the reputation of only flowering freely when the specimens reach a good size. The long spell of hot, sunny weather last year has presumably somewhat varied this rule, for in a Surrey garden a vigorous young specimen 20 feet in height has been flowering freely.—A. O.

FORTHCOMING EVENT.

January 7, 1913.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster, S.W.

HORTICULTURE IN 1912.

A BRIEF REVIEW.

THE present number of THE GARDEN marks the close of the year 1912, a year that has been of more than usual interest and significance to those who delight in gardening. In most business houses it is the custom to take stock at least once a year, so that those responsible for the management may know exactly how they stand. Profits or losses are calculated, failures and successes noted, and on the results thus obtained plans for the future are based. In much the same way, though with, perhaps, a less strict or accurate investigation, the wise gardener will review the year that is now about to close, and in so doing will bring to mind many lessons that have been learned in the prosaic university of practical experience. More often than not the best lessons are taught us by failures, for these naturally impress themselves upon our minds even more than do the brilliant successes that may be achieved, and goad us on, as Bruce of old, to try, try, try again.

The art of gardening can never stand still. In common with other pursuits of our daily life, progress becomes more rapid every year, progress that is leading us none knows whither. That we are but on the threshold of important and far-reaching developments is patent to all who take an active interest in the scientific investigation of plant-life. Electrification of the atmosphere, soil sterilisation, plant-breeding on Mendelian lines, the investigations of graft hybrids and plant diseases and pests, are all as yet in their infancy. What their ultimate value to the practical gardener will be it is impossible to say. Yet they must all tend to one great and glorious issue—the advancement of horticulture. The establishment by the Government of a diploma of Horticulture is, from an educational standpoint, a big step in the right direction, as are the grants from the Development Fund to various institutions for the investigation of plant diseases and pests, and the most suitable fruits and crops for various purposes.

Speaking generally, the year has been a generous one to gardeners. Crops of nearly all kinds have been good. Not for many years have there been such bounteous gatherings of Apples and Pears, while the Nut crop has been a record one. Roses have flourished amazingly, and as we write there are still a few stray blooms to cheer us. Daffodils and Tulips, Sweet Peas and Carnations, have all been present in abundance, and insect pests have, if anything, been less troublesome than of yore.

In other directions the year 1912 has been a memorable one. The great exhibition, so successfully held in the Chelsea Hospital Grounds during the closing days of May and the early part of June, will go down to posterity as a prominent landmark in the world of horticulture. Acknowledged on all sides to be the finest exhibition ever seen in this or any other country, the International Show of 1912 demonstrated to the whole world the wonderful advance that horticulture has made in this country during recent years; the impetus it gave to rock gardening alone will be felt for many years. Never before in the history of the society have the Royal Horticultural Society's exhibitions been so large and so well attended as they have been this year. In the spring the first special Daffodil show in connection

with the society was held, and it is pleasing to be able to record that this, the premier horticultural society in the world, is in a flourishing and rapidly growing condition.

The National Rose Society, too, has done good work during the year. Its three shows, held in London and Belfast respectively, revealed to the public at large the wonderful advance that the Rose has made and is still making. Numerous novelties of gold medal quality have been shown, and although some may not, under the severe test of time, justify the high opinion of the judges, others will go down to posterity and become the La Frances or Mme. Abel Chateaux of the future. The National Sweet Pea Society, which has passed through troublous and stormy times, has now entered smoother waters, and will, we hope, settle down to carry out the useful work that awaits to be done. The disqualifications for double standards caused much heart-burning at the summer show, and taught the committee a lesson which, when turned to practical account, will obviate such disqualifications in the future.

Notwithstanding the many demands that have been made on the purses of those generously inclined, the Gardeners' Royal Benevolent Institution and the Royal Gardeners' Orphan Fund have been well supported, though even now there is much more distress that needs alleviation than the funds of these deserving gardening charities will admit. Perhaps at this season of Peace and Goodwill towards all men some of our readers who have not already done so will be disposed to assist in helping, through either of the above charities, those who can no longer help themselves.

The most pleasing personal feature in the world of gardening during the year now ending was the honour of knighthood conferred on that grand old man of horticulture, Sir Harry J. Veitch. His long and strenuous life has been devoted to the art of gardening, an art that he loves so well, and it was with universal rejoicing that the news of this honour was received by all who are privileged to know him.

The foregoing are all pleasant recollections, some full of teaching and others merely reminiscent. Unhappily, in reviewing the past, the inexorable hand of Time is also brought vividly to our notice, and reminds us of many who were with us when the year commenced, but who have since passed into the Great Unknown. The Rev. F. D. Horner, the Rev. C. C. Ellison, William Baylor Hartland, Alexander Dean, William Deal, William Thomson, William Fyfe, G. W. Piper, T. Jones, George Maw and Robert Brown are among those who have made their mark in the history of horticulture, and who, alas! have fallen into a long and well-earned repose.

We close with a personal note. During the year numerous readers in all parts of the United Kingdom, as well as many countries abroad, have written us appreciative letters of our efforts to place before them each week interesting and useful information relating to the ancient craft of gardening. To all such, and also to those who from time to time have sent useful letters for publication, we tender our best thanks. That the year which is about to dawn may bring happiness and success to all our readers is our ardent wish. With them we face the future full of hope, and look with confidence for a continuance of the practical help that has been so freely and generously afforded us in the past.

GARDENING ACROSTICS.

AS announced in our issue for December 14, we are publishing a series of eight acrostics based on gardening or simple botany. Prizes of £3, £2 and £1, respectively, will be awarded to those sending in correct solutions of all the acrostics. The names of those who have correctly solved the problems will be published from week to week, and the final list of prize-winners in our issue of February 15, 1913. In all cases the Editor's decision must be final. The solution to Acrostic No. 2, which appeared last week, will be published, together with a list of those who have correctly solved it, next week, and the solution to No. 3, which is printed below, will be published in our issue dated January 11, 1913. For full rules governing the competition readers are referred to page 623 of our issue for December 14.

DOUBLE ACROSTIC No. 3.

First grown to please the taste; but now to please the eye.

The first letters form one of my old names and is suggested by the above—the last spell my modern one.

1. Two letters often reversed in the name of a well-known pendulous flower.
2. The generic name of the "Daisy Tree."
3. The man who so badly damaged John Evelyn's garden.
4. The author of a very large and famous eighteenth century Herbal; useful historically for its lists of plants.
5. An old but *difficult* Iris.
6. "Many nits, many pits"—an old Devon saying about winter. What is "nit"?
7. A new mauve Primula from Himalayan mountains.
8. The popular name of a genus of plants, some of which yield fine blue dye.
9. What promotes growth in plants.
10. Thistle-like in look—and reminiscent of the sea—I make a fine bold herbaceous plant.

Solutions of the above must be sent so as to reach the Editor at 20, Tavistock Street, Covent Garden, London, W.C., not later than January 4, 1913. Mark the envelope "Acrostic" on the upper left-hand corner.

SOLUTION AND NOTES OF ACROSTIC No. 1.

"CHINA ASTER."

| | | | |
|------|---|-----------|---|
| * 1. | C | HELSE | A |
| † 2. | H | ELIANTHU | S |
| ‡ 3. | I | NDIAN SHO | T |
| 4. | N | OD | E |
| § 5. | A | LDE | R |

* The Botanic Garden at Chelsea was founded in 1673. It was very famous when Miller was curator. Site of International Show, 1912. † The Sunflower is a Helianthus; so is the Jerusalem Artichoke. ‡ Indian Shot is another name for Canna—from the resemblance of the seeds to shot. It has been much improved of late years, so much so that it is now grown for its flowers, and not, as it used to be, mainly for its foliage. § The Alder grows in damp places. Its wood is used for clogs.

** Owing to the Christmas holidays, this issue had to go to press some days earlier than usual. We are therefore unable to publish the names of those who sent in the correct solution of Acrostic No. 1, but these will appear in our next issue with the names of those who have solved No. 2.

TREES AND SHRUBS.

CULTURAL HINTS ON NEW AND RARE PLANTS.

(Continued from page 635.)

TREES AND SHRUBS.

Viburnum Carlesii.—Though introduced ten or twelve years ago, this is still a very rare shrub, although the beauty of its white, pink-tinted, fragrant flowers is such as to suggest its becoming one of the most popular species. A native of Korea, it forms a shrub 2 feet to 3 feet high, with rounded, greyish leaves. Although it will grow in loamy soil, it prefers a little peat about the roots and likes a well-drained, sunny position. Cuttings may be rooted indoors during summer.

Cotoneaster bullata.—This pretty Chinese Rock-spray is of vigorous constitution and grows at least 4 feet or 5 feet high. It is conspicuous by reason of its large, dark green leaves and axillary clusters of coral red berries. A perfectly hardy shrub,

fruits, which ripen during autumn. A position in the front of a shrubbery suits it well. Any good garden soil may be used. Its long, ferocious spines are a distinct feature.

Pinus Armandi.—Lovers of conifers would do well to include this Chinese species in their collections, for it is very beautiful in appearance and as easily grown as any common Pine. Belonging to the five-leaved group, it bears some resemblance to the Blue Pine of the Himalaya (*P. excelsa*), the leaves being very similar in colour and size. A distinguishing feature, however, is its shorter and stouter cones. It is no use planting it in or about smoky towns, for, like other cone-bearing trees, it requires a pure atmosphere, and is likely to thrive best where the ground is moist though well drained.

Erica Veitchii is a hybrid Heath which was introduced a few years ago by Messrs. Veitch of Exeter. Its parents are the two South European species *E. arborea* and *E. lusitanica*, and it inherits the excellent habit and free-flowering qualities

may thrive in an inland garden if sheltered from the cold blasts of wind. The wide-spreading branches make this tree very picturesque and give to it another popular name of Parasol Pine.

The tree illustrated on this page will readily be recognised by those who visit Kew Gardens, forming as it does a landmark on the northern side of the Succulent House. It is a particularly fine example, and is said to compare very favourably with the trees in their native habitat. Attached to the tree is a tablet with the following interesting facts concerning the Stone Pine: "Native of the Mediterranean region, cultivated in England since 1548. The characteristic shape of this tree, with its wide-spreading head of branches and rugged trunk, is well known to travellers in Italy. The famous old Forest of Ravenna, which extends not far from the shores of the Adriatic for sixteen miles, consists mainly of this tree, but much of it was destroyed by the great frost of 1879. The timber is not of much value, but in Italy the tree is cultivated for its edible seeds. During the Roman occupation of Britain these seeds appear to have been imported from Italy to feed the soldiers, as remains of them are found in the refuse heaps of Roman encampments."

It is in the winter-time that the value of this and other Pines is most apparent, for at this season the dense heads of deep green foliage form a pleasing contrast to the leafless vegetation of deciduous trees. The seeds of the Stone Pine are larger than those of any other European species, and in Italy they are sold as food, to which the people show a very partial liking.

IVY AND ITS MANY WAYS.

THINGS that are extremely familiar are often apt to pass almost unnoticed. Such a one is our common Ivy; for it is only when one gives it a little careful thought, or something more than common observation, that one perceives what a wonderful and precious plant it is, and what an important part it plays in the clothing and adornment of our winter landscape. Indeed, it may truly be said that no one kind of vegetation can do so much for us when summer-leaving trees are bare.

When one is travelling about country roads in winter, Ivy is often the only green thing to be seen. The fields are brown plough, woods and hedges are bare and leafless. Even pastures and roadsides are not green, for what short grass there is, is of a dull grey colour, and partly obscured by the buff and brown of last season's bents. But any turn of the road may bring into view deciduous trees richly mantled with Ivy, a sight that rejoices the heart of any true lover of Nature's beauties. For it is in the depth of winter that the Ivy leaves are at their glossiest and that their bowery masses not only look their best, but also give the most comforting assurance of that cosy warmth and safe harbourage so friendly and beneficial to the varied forms of bird-life.

Often some handsome arch of tree-limb bending over the roadway would pass unnoticed were it not overgrown with Ivy; but the bushily-branching dark green clothing, accentuating the tree form,



THE STONE PINE (PINUS PINEA) NEAR THE SUCCULENT HOUSE AT KEW.

it is admirably fitted for the open border, and may be given a conspicuous place. Plant in good loamy soil, and increase by seeds sown in a warm greenhouse as soon as ripe.

Clematis Armandi.—This is a very beautiful species with evergreen leaves and large clusters of pure white flowers, which, individually, are $1\frac{1}{2}$ inches to 2 inches in diameter. It is a native of China, and is likely to become popular for walls, trellises and pergolas. It requires deep, rich loamy soil, and prefers a sheltered position where the branches are exposed to full sun. Propagation may be effected by cuttings, or by grafting upon roots of some other kind. The flowering-time is late April and early May. A very useful new plant.

Berberis verruculosa is a bushy Barberry growing 2 feet or 3 feet high, with shining, evergreen leaves which are dark green above and silvery beneath. Its yellow flowers are produced in pairs from the leaf-axils, and they are followed by purplish

of both. Unfortunately, it is rather tender; therefore its culture should be restricted to the warmer parts of the country. About London it thrives and flowers well, while it has also proved to possess good qualities as a pot plant.

(To be continued.)

THE STONE PINE.

(PINUS PINEA.)

WHEN it is remembered that the Stone Pine is a native of the shores of the Mediterranean, it will not be surprising to note that it is less hardy than some other members of the same genus. Even in a warmer climate than ours—on the shores of the Adriatic—exceptionally severe weather has been followed with most drastic results to the Stone Pine, as the subjoined notes testify.

Pinus Pinea shows a distinct preference for a sandy soil, and although a seaside tree, it

FLOWER GARDEN.

THE DOG'S-TOOTH VIOLET.

THE European Dog's-tooth Violet (*Erythronium Dens-canis*), while not infrequently seen in shrubberies and semi-wild parts of large gardens, seems, at least in the suburban villa garden, almost unknown. This is particularly strange, since the plant is of easy culture, delights in half shade, and when its very decorative greenish bronze, mottled foliage rises above the ground in late February or early March, surmounted by the pure pink or pinkish lavender flowers, with a chocolate zone in their centre, it is indeed singularly attractive. On bright days the petals reflex to a considerable degree, and then display the dark bluish black anthers, which form such a strong contrasting centre to the otherwise delicate tint of the blossom.

The flowers are large in proportion to the size of the plant, being frequently 2 inches or 2½ inches across, while they seldom rise more than 3 inches to 4 inches from the

ground. Why they should have been called "Violets" has often puzzled me, as they are distinctly Lily-like in formation, which is not especially remarkable seeing that they are members of the Order Liliaceæ. I believe the name "Dog's-tooth" Violet has been conferred upon them owing to the curious tooth-like shape of the bulbs.

With me they thrive almost anywhere in the alpine garden in quite ordinary gritty soil. I have them in both complete and partial shade, also in full sun, and despite the fact that they are generally considered shade plants, my experience serves to show that they flower more prolifically if the sun falls upon them to a considerable extent, though in the alpine garden the gritty soil and the proximity of stone lumps doubtless

tend to prevent them ever getting dried up. The accompanying illustration gives some idea of a group of these charming spring flowers, which gladden us at such an early time. It also illustrates my point as to how they thrive in sunlight, at least at Woodford. The spot they occupy faces full south and receives what sun there may be throughout the day. The plants have been undisturbed for some four or five years, while the last two years especially they have been better than usual.

It is, I find, a good plan to plant them deeply, say, not less than 6 inches from the surface of the soil, often deeper; indeed, such deep planting for bulbs in the alpine garden I consider most beneficial, as it allows of surface culture for other and more feeble-rooting subjects over the place occupied by the bulbs.

Woodford, Essex.

REGINALD A. MALBY.

THE MOCCASIN FLOWER.

(*CYPRIPEDIUM SPECTABILE*.)

ALTHOUGH there are several of the *Cypripediums* hardy in this country, there is none more beautiful or interesting than the Moccasin Flower, an illustration of which is given herewith. Attaining a height of from 1 foot to 3 feet, it is a handsome plant, the broad, rather hairy leaves being surmounted by flowers of rose pink and white, from one to three being borne on a stem. This *Cypripedium* needs a cool, moist, shady situation, with soil, 1 foot deep, composed of coarse peat, good fibrous loam, some coarse sand and charcoal. If planted during the late autumn months, or even at the present time if the weather is mild, the plants will soon establish themselves, providing the roots were not allowed to get dry in transit. Once planted they are best left alone. The Moccasin Flower is often used for planting in damp, shaded nooks in the rock garden, a situation for which it is admirably adapted, but it can be used with excellent results in the border providing its requirements as to shade, moisture and soil are attended to. In the more open parts of *Rhododendron* beds we have seen it flourishing, the moist peat apparently suiting it well. It is a native of the Northern United States, and was introduced to this country in 1731, but even now it is by no means a common plant.



A SMALL COLONY OF THE MOCCASIN FLOWER
(*CYPRIPEDIUM SPECTABILE*).

reminds us how often it is that trees, and especially Oaks, assume this graceful form over roads, and thereby give the impression of protective sympathy towards those who pass by. This is the more noticeable in that the Oak is not always graceful in form like the Birch or the Ash.

The small Ivy of the hedge-bank is beautiful too, in winter, and on poor soils especially, taking on wonderful colourings of brown and bronze and red, some leaves even approaching a scarlet colour. In the trailing or creeping stage, and when it first begins to climb, the leaves are of the typical five-pointed form. But as soon as it has climbed enough to make a distinct trunk, and to throw out the woody side branches that will produce flower and fruit, the form of the leaf changes to the plain shape with pointed end, only varying more or less in width. This rule, with one exception, is invariable. As long as it trails on a bank or spreads over the floor of a wood, or only begins to climb, the leaf is wide, either five or three pointed, or, at any rate, wide-shouldered; in the mature state it has none of these leaves. The exception is where, as on walls, the Ivy is clipped every year, and is prevented from making the woody side-shoots. In this case the leaves remain of the wide shape.

Other trees—for Ivy is a true tree, having a woody stem and branches—have the same way of producing leaves of two patterns. The most familiar is the Holly, though in this case leaves both prickly and smooth-sided are seen on the same tree. The *Ilex* also has the leaves prickly-edged in a young state, and plain, almost Olive-like, when older.

Ivy that is growing on walls, as already indicated, usually needs cutting back every year, otherwise it will provide too great a leverage for the wind. This is best done towards the end of March, as new growth will then be quickly made.

G. JEKYLL.



THE DOG'S-TOOTH VIOLET (*ERYTHRONIUM DENS-CANIS*) IN A GARDEN NEAR LONDON.

ROCK AND WATER GARDEN.

ROCK GARDENS IN THE MAKING.

(Concluded from page 638.)

The Effective Grouping of Alpine Plants.—

Colonising or the effective grouping of alpine plants on rockwork is the only true way of growing them; the only effective method worthy of serious consideration; the only way, indeed, in which the operator is enabled to get the least glimpse of Nature's lavish work. At its best it will of a surety be but the veriest glimpse, yet, as such, sufficient to enthuse, sufficient to spur us on to further efforts. In Nature we see a colony or group of this or that, spreading away, carpet fashion, over soil or rock, or anon forming rugged tufts as informal as one could wish. A variation of this is seen in the individual plant stretching from rock to rock, staining it, as it were, with its flowers. Then

plants, to carry the deception further, should be high up, the finals—for the moment—seedlings of a couple of years old. There should be no abrupt endings; rather should such plants bejewel the rock crevices in diverse directions, furnishing, for example, the projecting rocky ledge and continuing stream-like into the crevices beyond. Where miniature ravines are formed with this *Ramondia* as the chief ornament, care should be taken to wedge in here and there irregular pieces of rock, a plant occurring at the upper part as though intercepted in its downward progress, with others at the sides tightly tucked against the rock, and yet another under the brow of the rock, should such exist, as though this latter had tumbled over and found a resting-place for itself. In this way not only is formality avoided, but a *multum in parvo* system is set up which makes even a small rock garden a Paradise.

Free-Growing Subjects like *Saxifragas apiculata* and *sancta merit* attention apart. These and others

plant as *Saxifraga icelandica*, the peer of the Cotyledons, need not always be kept under the eye, it is seen to finer effect higher up, where a horizontal cleft of rock would be dignified and ornamented by its presence. In this direction much good may be done by making the plant fit the position as though it were made for it alone. Quite worthy of special thought are

Suitable Plants for Dryish Places, those with silky or downy leafage that never appear to such perfection with the rank and file. A typical instance occurs in the case of the Cobweb Houseleek, which, if commonplace in a way, is without equal in its own particular line. Snugly nestling at the foot of a rock, or piling itself up against some imaginary inaccessible crag, or doing similar service over stony ground, it is one of the best plants I know. It pays, too, for separating into single rosettes, pricking these out an inch or more apart over the steeper inclines to presently form rivulets, white

almost as driven snow. The smaller rosettes of the plant—the chickens—do admirably for horizontal wall crevices. Then I think too little use is made of the carpet-forming *Sedums Lydium*, *hispanicum* and its variety *glaucum*, which are capable of the most charming effects. Too small for pricking out ordinarily, the only good way I know is to rub them to pieces through a sieve, and, mixing the particles with their own bulk of sandy soil, make a sowing where required. In a season or less the rock gardener may possess himself of perfect lawns of these and similar sorts, plants which are delightful for the hottest places imaginable.

In a Final Sentence a word must be said in favour of trailing plants, those like *Androsace lanuginosa*, *Thymus lanuginosa*, *Campanula garganica*, *Polygonum vacciniifolium*, *Saponaria*, *Coronilla*, *Phlox* and *Candytuft*, which have a value of their own for the purpose indicated. A word must also be said for favouring the free use of small bits of things—*Phlox*, *Campanula*, *Saxifrage* or what you will, whether from cuttings, divisions, or seedlings, since such as these, endowed with the freshness and vigour of youth, are those which, growing into patches,

mantle earth and rock in their own inimitable way.

E. H. JENKINS.

THE SNOWDROP WINDFLOWER.

(*ANEMONE SYLVESTRIS*.)

THIS is one of the daintiest of spring flowers for either rock garden or flower border. It is not difficult to see from what source its popular appellation is derived, for, before opening, the nodding white flower-buds readily suggest its English name of the Snowdrop Windflower. The expanded flowers are also white and, it should be added, they are sweetly fragrant. It flowers in April or in the early days of May, when it is seldom more than 18 inches high. A half-shaded position seems to suit it best, but it will revel in almost any soil. It is particularly free growing, and it should be allowed plenty of room, so that its roots may ramble unchecked. Considering its many virtues, this very pretty *Anemone* should be widely cultivated.



A TALL WINDFLOWER FOR THE ROCK GARDEN (*ANEMONE SYLVESTRIS*).

there is the free-seeding subject *Primula scotica*, or *P. frondosa*, for example, seen now in their battalions, or anon in drifts, abrupt here, trickling out in isolation there, each and all object-lessons in their way, worthy of our best attention and still more worthy of imitation. In the Friar Park rock garden there are many evidences of studious work, and the rock garden enthusiast will not go far wrong if he makes a study of the coloured plate referred to in last week's issue, and takes it so far as is possible as his guide.

A First Principle of the Plant-Grouper should be informality, since even in this the planter too frequently gets into set ways, rounding or shaping his patches of things in a way Nature never does. For example, a batch of *Ramondia* may not only trickle over the nearly vertical face of a damp rock, but spread out and beyond its base, thereby suggesting that the start was made long ago high up, and the thing we now see is the result of a few generations of seedlings. In such work the older

akin are at first carpeters of the soil. Presently, however, and with such as the first named more particularly, there is an inclination to tuftedness, which lifts the centre of the plant out of touch with the soil, death ensuing to the part if the plant is not quickly dealt with. The best way of treating all such plants is to pull them to pieces periodically, replanting little tufts of rather less than two inches across freely over any available area of ground. In this way yard-wide patches of some of the freer-flowering subjects are easily obtained. The *Aizoon Saxifragas* also well repay for separating into single rosettes occasionally, and by pricking them into well-prepared soil a greater vigour, as also freedom of flowering, is ensured. One of the best of these is *S. A. rosea*, a variety richly endowed in stem as well as in flower colour. The great Pyrenean *Rockfoil* (*S. longifolia*) is the finest of the genus, inimitable for the nearly vertical faces of the rock or for the sharpest of sunny slopes with rocks around and a good root-run of soil. So fine a

THE GREENHOUSE.

THE CULTIVATION OF MALMAISON CARNATIONS.

THE mixture which I use for the layering of Malmaisons is coke or coal ashes and rough sand, at the rate of three parts ashes to one part sand, passed through a quarter-inch sieve. As a rule, layering begins here on or about August 1, and the work is done in a shallow frame. When the plants are layered, syringe and keep them fairly close for a week, after which admit a moderate circulation of air day and night. The practice which I adopt is to tilt the sashes of the frame on their sides, thus allowing a small space at the bottom and top of the sashes to admit air and to circulate it evenly. I like to allow three weeks from the time of layering before the rooted shoots are severed from the plants. After severing, the layers are much better left for another five or six days before lifting and potting. During the period the layers are in the frame a most watchful eye is necessary, and attention must be given to the watering, as the mixture soon becomes dry. A good supply of water may be given without any risk, and wherever soft water is available, the same should be applied.

Potting Rooted Layers.—

Three-inch pots are used, and are crocked with ashes or lime-rubble. The mixture for potting consists of loam, rubble, sand, a little peat when obtainable, and a light dusting of coal soot. No leaf-mould is used, owing to eelworms being in it. The potting should be carried out to a [degree of firmness. When the batches of layers are potted—and] that is generally the end of the first week in September—they are stood in a cold frame about an inch from the glass, syringed, and shaded lightly for a few days if the weather is bright. I always grow the plants with a good circulation of air passing among them, the sashes being raised on blocks about three inches high.

Plants for Late Blooms.—

A large batch of Malmaisons in full bloom is always required for Goodwood Race Week; that is, generally, the last week in July. This is late for them to be in flower in the South of England, and the plants require special treatment. A week after the layers are potted, a large batch is stopped hard back. Soon the young plants break into growth, and throw up from five to eight growths. The plants are generally very well rooted by the second week in October, and are then potted on into 6-inch pots. That is the final potting for the first season. They are staged in a low, span-roofed house, with a free circulation of air, and a little heat in the pipes to keep the atmosphere dry. Here the plants

remain until the end of July of the following year, when the blooms are cut for use. The potting mixture at this stage ought to be heavier than that used for the layers when potted into 3-inch pots; something like four parts of loam, one part of lime-rubble, three parts of peat and sand, and a dusting of soot. Let the soil be in good condition before starting, so that the plants may be potted very firmly, as this is one of the secrets of success. When the plants are potted firmly, they go over a much longer period after being watered, and in the dark days of winter are much better kept on the dry side. The tissues of the whole plants become quite

are kept cool, and bloom at the end of July of the next year.

Rust Disease.—Regarding the rust on the Malmaisons, I have had a great deal of trouble. Three years ago, about the last week in November, I cut away all the parts that were infested with rust. I repeated this treatment during the winter months. In March, when the days were brighter, I started experimenting with salt. First of all, I used 1oz. of agricultural salt dissolved in three gallons of soft water; with this I sprayed the plants twice a week, but increased the quantity of salt each time. When the amount of salt reached 5oz.,

which I dissolved in the above quantity of water, I kept to that strength; and I have found during the past three years that spraying the Malmaisons with salt water at the above strength not only keeps the plants clean, but also invigorates their growth. The Malmaison disease, or spot, may also be kept under a great deal by the use of sulphate of potash. This should be applied to the plants (when being watered) regularly once a week, at the rate of 1oz. to one gallon of water. Should blooms be cut from plants treated thus and used in glasses for decorations, the water in the glasses may require more frequent changing than usual, as the sulphate that has been taken up into the blooms has an effect upon the water. When a batch of flowering plants requires pushing a little, 1oz. of nitrate of soda in three gallons of water, when the Malmaisons are watered, may be used with good results. Malmaisons required for winter blooming need an airy house with a night temperature ranging from 50° to 55°, according to the weather.

A. ALLARDICE.

Goodwood House, Chichester.



A SILVER-TIPPED VARIETY OF THE NORFOLK ISLAND PINE (ARAUCARIA EXCELSA SILVER STAR). A UNIQUE PLANT FOR GREENHOUSE OR ROOM DECORATION AT THIS SEASON.

THE SILVER-TIPPED NORFOLK ISLAND PINE.

(ARAUCARIA EXCELSA SILVER STAR.)

THE Norfolk Island Pine is particularly well known in this country by virtue of its ornamental uses, either as a greenhouse or as a room plant. Unfortunately, it is not hardy, but when well grown in tubs or large pots it becomes a very desirable plant so long as it does not attain proportions too large for its surroundings.

A great deal of interest has lately been centred upon a variety of this Araucaria having remarkable white tips to its growths, both lateral and terminal. The effect upon an otherwise normal plant is very striking, more especially as the Araucaria is so beautifully symmetrical. Looking down upon the horizontally spreading branches, the white tips at once suggest the name of the variety, viz., Silver Star.

At the end of the growing season these silvery white tips turn to the normal green colour of the plant, but with growth renewed it again assumes its silver starred appearance.

hard under this treatment, and are far better able to withstand the ravages of the rust that is so prevalent in the Southern Counties. The flowers are not so large from these stopped plants, although much more numerous.

Potting Old Plants.—Some plants may not throw up flowers, and these are the best to pot on for the second year, as they are stocky in habit. The best furnished plants are potted on into 9-inch pots the second week in August. I also recommend the staking of these plants as soon as possible, as then there is not so much harm done to the roots as when the staking is left until the spring. These plants

TWO OF THE FIRST ENGLISH FLOWER BOOKS.

THEIR AUTHORS AND CONTENTS.

(Continued from page 643.)

LITTLE is known of Rea beyond what can be gathered from the hints and facts which are to be found in his book "Flora seu de Florum Cultura." I suggested that the writer of his life in the "Dictionary of National Biography" was hardly justified in describing him as a market-gardener in face of the fact that he always refers, as far as he himself is concerned, to planting and gardening as a recreation or diversion. I might have added as an additional reason for my doubt that throughout the whole book he never once suggests that he has any of the plants he mentions to sell himself; but, on the contrary, seems to hint once or twice that they may be obtained in nurseries about London and elsewhere. I am sorry I am unable to offer any solution. If any readers of THE GARDEN can do so, I hope very much that they will send a note about it to the Editor who, I am sure, will only too gladly publish it. I think it will be best to say what I have to say about the "Flora" at once and leave the life of Gilbert to follow in my third article, so that it may not be separated from my description of his book.

The "Flora" was, as far as is known, the only book ever written by John Rea. Its title to fame rests on its being the first work of any importance in the English language which was entirely written from the standpoint of a garden—perhaps I ought to say "of a garden of pleasure." It is wholly horticultural and, for the first time in history, the spirit of the Herbal is altogether absent.

A second factor consists in its being the work of a man who knew what he was writing about. He had been, he tells us, a planter for forty years, and very many of the flowers that he mentions he had at one time or another grown himself. The first edition was published in 1665. It is small folio size and is divided into three parts: "Flora," Part I.; "Ceres," Part II.; and "Pomona," Part III. The frontispiece is not so elaborate as was then the fashion, but it is nevertheless in sympathy with the tone of the age, inasmuch as it is allegorical and represents the goddesses after whom the different parts of the book are named.

A preface to the reader; two letters to his patrons, Lord Gerard and Sir Thomas Hanmer; and several pieces of very fulsome poetry serve as an introduction to the more serious business of how to "make, plant, preserve and keep both Fruit and Flower gardens furnished with the choicest Plants, Flowers and Fruits that will endure the extremity of our long Winters, . . . how to set, make grow, increase and preserve each particular, as also for the raising of new varieties, . . . learned from my own practical experience."

Rea did not think much of the illustrations in Parkinson's "Paradisus," "such artless things being good for nothing, . . . for did his Flowers appear no fairer on their stalks in the Garden than they do on the leaves of his book, few Ladies would be in love with them, much more than they are with his lovely Picture." Accordingly he will have none, and all we find are "some Draughts for Flower gardens." The first edition had such "favourable Acceptance" that he published in

1776, with the assistance of that ingenious and worthy person, Sir Thomas Hanmer, a second impression "much amended" and "enlarged," a "multitude of rare Flowers and Fruits and divers considerable and necessary instructions and observations" being added. A third edition, or, rather, reprint, was issued in 1702. This is exactly the same as the 1676 one with the substitution of "third" for "second" on the title-page.

The first part, entitled "Flora," deals with the making and laying out a garden with flowering shrubs and trees and with bulbous and perennial plants. The opening paragraph tells us what manner of man John Rea was, and gives us the secret of his success. I must quote from it, for as it was then, so is it now, and so doubtless it always will be. "It is impossible for any man to have any considerable Collection of Noble Plants



THE FRONTISPIECE TO REA'S "FLORA."

to prosper, unless he love them: for neither the goodness of the soil, nor the advantage of the situation will do it, without the Master's affection." The results are twofold—he will take pains in their cultivation and spend money on their acquisition. A sentence which comes under the latter head would make a good motto for a nurseryman's catalogue: "To some" (obviously not to "J. R.") "he may seem no wiser that parts with forty or fifty pounds for an Horse or Hawk which must be daily fed and attended, than he that gives so many shillings for a noble Plant or beautiful Flower, that needs little of either."

One of the most striking points is the small size of the fruit and flower gardens suggested by the author: "Fourscore yards square for the Fruit and thirty for the Flower Garden will be enough for a Nobleman: but for a private Gentleman forty for the one and twenty for the other will be sufficient." Both are to be walled round,

and in the case of the latter it should be geometrically laid out. Long beds and wide walks are to run all round parallel with the walls, and in the centre there is to be a "fret," bounded with a low palisade covered with Roses, and the interior arranged after the fashion of the plans with which the book is furnished. It is to be a sort of out-of-doors conservatory, fed season by season from an outside nursery where there are hotbeds for raising tender plants and seeds, and "where many pretty Conclusions may be practised" in testing novelties. Here, too, is to be a house for "Greens and other tender plants in winter."

There are no very definite instructions about laying out the fruit garden. The walls are to be covered with "Pears, Plums, Cherries, Apricocks, Peaches, Nectarines and Vines." The ground inside is then to be covered with standard trees "at proportionable distances," betwixt which may be placed "Roses, Currans, Gooseberries, Cypress trees, Mizerions or what other Shrubs or Greens you like." There are to be beds round the walls and elsewhere (we are not told where), which may be planted with the poorer varieties of "Lillies, Martagons, Pionies, Daffodils, Tulips and other sorts" not fit to be received into the flower garden.

Of the most popular flowers of the day I will have something to say when I come to Gilbert's "Vade Mecum." So I pass on to Division II., "Ceres," which deals with "all such pretty Plants and fine Flowers as are yearly or every other year raised from seeds."

"And though those past do more excel,
Yet some perhaps, may like these well,
Since gain'd and kep't with little cost,
Two properties belov'd of most:
How they are raised Ceres will tell."

Again I must leave my comments and lists until next week. My sand is nearly run out, and I have said but little of "Pomona":

"That you may taste and know the best,
Pomona bids you to her Feast."

An orchard is mentioned as an adjunct of a well-equipped domain, and this partly accounts, I expect, for the small size of the fruit garden. Grafting is very fully gone into. Four different ways are mentioned and described in detail, e.g., (1) Grafting in the Cleft, (2) Whip-grafting, (3) by Approach and (4) by Inoculating or Budding.

Numerous varieties of Apples and Pears are mentioned. Many of the latter, we are told, came from France. Probably the part of most interest now is that which treats of Vines. Two of the horticultural marvels of the past in Britain are the cultivation of Saffron and Vineyards. One cannot help wondering if they really flourished. Does this remark of Rea's, I wonder, let in some light upon this problem? After wishing those who plant new vineyards good success, he says, "in some years they may have some encouragement, but if the Vineyards in such places hit one year to bear grapes fit to make wine, they are like to fail three for it: if they can make good Vinegar of them it is as much as I can expect from them."

I finish this with the closing words of the book. They are simple and of interest to-day:

"And for my guerdon this all I crave,
Some gentle hand with flowers may strew my grave,
And with one sprig of Bays my Herse befriend,
When as my Life, as now my Book doth end."

JOSEPH JACON.

(To be continued.)

GARDENING FOR BEGINNERS.

THE PROPAGATION OF LILIES.

THE Lilies, or, to give them their correct botanical name, *Liliums*, are for several reasons particularly suited for amateurs and beginners in horticulture. By far the greater number of kinds are perfectly hardy, and a dozen or more are adapted for cultivation in the ordinary soil of the small villa garden. Their propagation



1.—A SCALE LEAF FROM A LILY BULB WITH YOUNG BULB ATTACHED, SHOWING METHOD OF PROPAGATION FROM BULB SCALES.

is in reality an easy matter. For raising seedlings or growing bulbils in a small state a cold frame is useful, but by no means a necessity.

Sowing Seeds.—There are several methods of increase—by seeds, scales, bulbils and offsets, or by division. Sow the seeds as soon as ripe, or when they come to hand from the dealer, in well-drained pans or pots filled with light, sandy soil. Scatter the seeds thinly over the surface and just cover with a mixture of sand and fine soil. Place the pans or pots in a cold frame or plunge them to the rims in ashes, choosing a sheltered position away from the sun and cold winds in winter. The thin, grass-like growths of the Lilies may show above the soil in some instances in four or five weeks, others will take a little longer. One or two Lilies



3.—A CLUSTER OF LILIAM TESTACEUM BULBS, WHICH MAY BE DIVIDED UP FOR INCREASING STOCK.

are very erratic in their period of germination. Seeds of *L. giganteum*, for instance, if sown as soon as ripe, sometimes come up readily, while if stored they will not germinate for a year, or even two years, the seeds, though quite good, lying dormant in the soil.

Pricking-Off Seedlings.—When a couple of inches high, pricking-off about one and a-half inches apart to other pans or shallow boxes will be desirable. Prepare light, sandy soil for the seedlings, made up of equal parts loam, peat, leaf-mould and coarse sand. If no peat is at hand, use two parts leaf-mould. Return again to the cold frame till the following spring, or plunge in ashes outside as before. When plunged outside, the pans should be protected from frost with Bracken or light Aster (*Michaelmas Daisy*) stems. Galvanised roofing, or some similar material, is desirable over the pans to throw off excessive moisture when the tiny Lilies are resting. The next move for the seedlings will be a prepared bed of light, sandy soil in the garden. Some of the plants flower the second year from seeds, notably *L. tenuifolium*. The third and fourth years will see practically all in flower except, perhaps, *L. giganteum*, which may take a year, or even two years longer, but when it does flower, pushing up its huge spike 6 feet, 8 feet or more high, it is worth all the waiting.

Increasing by Scale Leaves.—The scale leaves of the bulbs, one of which is shown in Fig. 1, are sown thinly on the surface of pans in the same way as seeds and nearly covered with coarse sand. In due time tiny bulbils develop at the base of the scale leaves, as shown in the illustration. These push up thin grass-like leaves, and the subsequent treatment is then the same as for the seedlings. The scale leaves are obtained from the outsides of the old bulbs, a dozen or more from each. Too many must not, of course, be removed, or the parent bulb will be injured.

Propagation by Bulbils.—Bulbils are formed in the axils of the leaves on the stems of several species, the best-known being *L. tigrinum*, *L. bulbiferum*, *L. Brownii leucanthum* and *L. sulphureum*. Some Lilies develop bulbils, or tiny bulbs, near the base of the stem above the bulb, as shown in Fig. 2. Instances of this are *L. Henryi* and *L. longiflorum*. The bulbils should be detached from the stems in autumn and dibbled in boxes or pans of sandy soil, as recommended for pricking-off seedlings. Bulbils flower in about two years.

By Division.—The division or parting of Lily bulbs in autumn or spring is the most common method of increase. The fact that there are several bulbs in a cluster beneath the ground, such as the illustration of *L. testaceum* in Fig. 3 depicts, is apparent when several flower-stems come up from the clump in close proximity. All that is necessary is to lift the clumps, divide them up as much as possible, and replant. A thin layer of sand placed below and above the bulbs is a useful protection from excessive moisture in heavy soils.

The division of the *Madonna Lily*, when necessary, should be done in August. A goodly number of the sixty odd species of *Lilium* require prepared soil and selected positions in many gardens. There are, however, a number which will thrive and flower freely in most soils in company with the Japanese Anemones, Shasta Daisies, Asters and Phloxes. Twelve of the best of such Lilies are *L. pyrenaicum*, *umbellatum*, *Hansonii*, *pomponium*, *candidum*, *testaceum*, *chalconicum*, *croceum*, *Martagon*, *Martagon album*, *szovitzianum (colchicum)* and *tigrinum*. These will provide a succession of flowers from May to September. A. O.

THE WINTER TREATMENT OF ROSES.

Newly-planted Roses.—Especially after rough winds and in bleak situations it will be well to



2.—A BULB OF LILIAM HENRYI WITH SMALLER BULBILS FORMED AT THE BASE OF THE FLOWERING STEMS. THESE PROVIDE AN EASY METHOD OF PROPAGATION.

examine the plants, and any that have become loosened should be made firm by treading at the base. The Tea section are none too hardy in the event of severe weather, and their stems are apt to suffer near where they are worked on the stock. A little dry Bracken placed among them during cold spells will greatly protect them, or soil or ashes may be drawn up in a heap around the stem, and can be removed as the conditions permit.

Climbing Roses.—These will be much improved by having a good mulch of well-decayed manure applied at the base, and this may either be just worked in under the soil or allowed to remain on top. The plants on pillars or pergolas may be gone over when the weather permits, and old wood removed and the growths thinned and retied; but not during frosty weather, which is neither good for the plants nor the operator.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Lily of the Valley.—No garden is complete without a colony or more of this fragrant flower, and the present season, while the weather is open, affords a good time for planting. The ground needs to be well worked and enriched with farmyard manure, and if at all of a tenacious character, add plenty of road scrapings, leaf-mould or something of a lightening nature. Where space permits, a good site for making a plantation is under a north wall, and permanent beds will at this season benefit with a top-dressing of leaf-mould. The plants need shade, and will thrive remarkably well if planted under bush or pyramid fruit trees.

Agaves or Yuccas.—Where these are used for terraces, grown in tubs, care should be taken that they do not suffer from frost. The place in which they are stored need be only just frost-proof. Little water will be needed. The greatest care ought to be taken of the leaves. The spines on some are very sharp and poisonous, and are best protected by placing a cork on each.

The Herbaceous Borders.—During wet weather avoid treading on these as much as possible. The sooner the clumps are re-divided and planted, however, the better. The stronger-growing perennials will need considerable curtailing, and many may with advantage be transferred to the wild garden. Any plants that are known to be none too hardy should have a good covering of cinder ashes, and those that produce succulent shoots will also in this way be protected against slugs.

The Rock Garden.

Alpines in Pans.—Those who can devote a small quantity of glass to display these when grown will derive considerable pleasure from them, not only when in flower, but also during their various stages of growth. The pans should be well drained, filled with a suitable compost, and surfaced on the top with limestone or granite chippings. For a time, a frame where they may stand close to the glass will suffice. Water them in to settle the soil, but be sparing afterwards. Ventilate freely when the weather is mild, but protect adequately from hard frosts.

Plants Under Glass.

Cyclamen.—Assist the plants with properly-diluted farmyard manure occasionally, so as to prolong the season of flowering and also to keep them of good substance. Watering must be carefully done, and the water poured into the side of the pot and not on to the corm. When gathering the flowers, always pull them in preference to cutting them off.

Cleanliness of Plants.—Both young plants that are being grown on and those that are being used for furnishing should not be permitted to become infested in any way with insects, or at this dull season it will cause them much injury. Mild fumigations on calm nights will tend to keep them healthy.

The Shrubberies.

Planting.—While the weather permits, press forward with the work of transplanting, as frost may hold the ground tight for a considerable period. Choice specimens should be mulched and made perfectly secure against winds.

Shrubs for Winter Effect.—I have, I think, touched upon the subject of planting many of our commoner shrubs in masses for producing a warm and pleasing effect in midwinter. The beds are now revealing their beauty, and where one has the chance of doing it, irregular beds may now be formed in the wild garden or pleasure grounds, beside carriage drives, &c. Have the ground well dug or trenched, and add plenty of decaying refuse and manure. The following subjects will be found admirably adapted for such a purpose: *Spiraea Douglasii*, *Cornus alba* and the variegated form, *Salix viminalis*, *S. cardinalis* and the White-stemmed Brambles.

The Hardy Fruit Garden.

Blackberries.—The Cut-leaved Blackberry is deserving of wider culture, and may be planted in beds and allowed to trail over the ground-level or planted against trellises or fences in the garden,

The fruit of this is greatly in request for tarts and preserves, and the plants are really of little trouble. Now the old fruiting canes may be cut away and the current season's growths equalised out and tied into position or otherwise trained. Give the bed or surroundings a fork over and apply a mulch of decayed manure.

The Kitchen Garden.

Crops in Store.—These should be kept as cool as possible, excluding frost, and Onions especially should be looked over frequently to see that they are keeping soundly. A supply of Parsnips and Jerusalem Artichokes should be lifted, or a portion of the ground covered in case sharp frosts prevent digging them up.

Potatoes.—For early supplies next year the tubers for seed should be spread out singly in a light, cool structure, so that they will form good strong shoots. A few may be placed in trays and put in a forcing-house where it is not too hot, and be damped over occasionally.

Mushrooms.—Avoid too much fire-heat where this is installed, as it is fatal to their growth when abused. Keep the structure damped down, and see that the beds do not suffer by becoming too dry. Beds that have been in bearing some time will benefit by a good soaking of diluted liquid manure-water. Those out of doors must be well protected from cold.

Fruits Under Glass.

Replanting Vines.—When replanting Vines, if it is considered essential and the borders are taken out, if young canes take their place do not be too lenient with fresh material, but make up a new border not more than a yard wide after putting the drainage in perfect order, as this will suffice for the first season's growth, and an addition may then be made each year. This prevents the mass from becoming sour before the roots enter it, and is much more invigorating to the young rods. If dormant canes are to be planted, do so just before they commence to move their buds, allowing them to remain in the pots till then.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Flower Garden.

Belladonna Lily.—The foliage is now in course of growth, and though practically hardy, some means of securing the foliage from the effects of very severe frosts should be at hand. If not already done, stir the surface of the soil or scatter some fine soil among the plants. Ours grow in a dry, warm position.

Christmas Roses.—I do not recollect the several kinds ever to have been so early in blooming. *Helleborus angustifolius* was in flower towards the end of November, and *atifolius* was nearly past when the former commenced opening its flowers. The coloured species, on the other hand, have given fewer flowers than usual in December.

Seed Orders.—We now grow so many annuals in the flower garden, or at least flowers that are treated as annuals, that I find it convenient to order most of them before the end of the year, so as to have them delivered early in January. It must be remembered that quite a number of these, to be successful, must be sown early in the year and allowed a long period in a cool temperature to gain strength. Few of them bear a forcing heat, though a moderately high temperature may be allowed to hasten germination.

The Fruit-Houses.

Keeping Grapes.—It happens that late Grapes cannot always be cut, owing to lack of a Grape-room. The bunches may be preserved on the Vines—Muscats till the end of February, and late black varieties till some weeks later—but it is not to be commended, being expensive in keeping fires to dry the atmosphere, and hindering the cleaning of the Vines.

Vine-Cleaning.—This important operation should be proceeded with and finished as soon as possible. If the Vines have been free of insect pests during the growing season, nothing more will be needed than to rub off the loose bark, and clean in a more particular manner the spurred portions and scrub

them with hot soapy water. If insects have been in evidence, then the whole of the bark should be carefully scraped—not peeled—washed a few times with a strong soapy solution, and finally painted with clay reduced to the consistency of paint, to which a ninth part of tar has been added. Lime-wash all the stonework, and wash the woodwork with an insecticide. The glass should be well syringed with hot water. Remember that the Vine is peculiarly susceptible to injury from strong insecticides, even when at rest, and do not apply petroleum or nicotine to the rods.

Peaches.—Late varieties, as well as Vines, should be seen to without delay, first of all going very carefully over the trees and thinning shoots where they have been left too thickly, and shortening unripened tips to matured wood. I never find it necessary to wash or paint the wood of Peaches, but they should be thoroughly syringed or sprayed with hot water, after which lay in the shoots as straight as possible, giving each sufficient space for the leaves to develop without overlapping. Clear off the effete surface soil, and after applying some fruit manure, freshen it with some loam, as sound as can be got.

The Plant-Houses.

Rearrangements.—After the reduction of flowers consequent to the meeting of Christmas requirements, a great many Chrysanthemums will be thrown out and space found for Arums and the bulbous forced plants and Cinerarias, which are now fast coming on.

Dutch Bulbs.—In the course of the next week or so the bulk of these still plunged out of doors must be transferred to frames, where, for a few days, they should be covered with mats till inured to the change. Where rats are about, it is essential to protect Tulips, which is simply done by inverting an empty flower-pot over each pot. None of these will require water for some weeks.

Forcing the Above.—To succeed those already in flower or being forced, a large batch should be introduced into one of the pits with a temperature not exceeding 50°, in which they will come along very slowly and be fit to introduce to a hotter temperature as required. If space is limited, they will do very well in the meantime stored under the stages. After this date the earlier varieties of Narcissus will bear more heat, but, as a rule, they succeed best if not forced hard at an early stage of growth.

Gloxinias.—To flower early, a few old plants may be started, being very careful not to soak the soil in which the tubers are resting. As soon as the growths have begun to push, replot the plants, after which they will progress rapidly in a stove temperature.

Coleus thyrsoides.—The flower-spikes are now beginning to push, and a portion of the stock may be introduced into a higher temperature to hasten flowering. They like plenty of water at the root, also manure-water, so that the blue is intensified and the foliage kept a clear green.

Vegetables.

Tomatoes.—Those plants which have been grown so far in pots, with a few fruits set, may be planted in shallow beds with slight bottom-heat, in which they will now make better progress. At this time of year the stems must not be buried any deeper than they have been in the pots, and water must be administered very carefully for the next six or seven weeks. The sowing of some weeks ago should have resulted in plants ready to prick off, either into shallow boxes in light soil or singly into 2½-inch pots, the plant being dibbled in near to the side of the pot. Much heat is essential in the meantime.

French Beans.—With the clearing of houses of plants and the starting of Vines, it is usual to begin the forcing of these, where means for doing so earlier does not exist. They succeed very well in rather deep, narrow boxes, in which two rows of plants can be grown without crowding each other. One or two of the climbing varieties produce enormous crops, but it is too early to attempt these, an early dwarf variety, such as Osborne's Forcing, being more suitable. Currents of cold air from careless ventilation, and inefficient watering are certain precursors of red spider, which, once it attacks the plants, can scarcely be dis-established, and usually it is wise to throw out the affected plants.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.E.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Sopbro-Cattleya-Lælia Thisbe.—Sepals and petals a brilliant ruby crimson, lip of a deeper crimson hue, with a suspicion of purple. A really glorious piece of colouring. The flower measures nearly four inches across. From Mr. F. Monteith Ogilvie, The Shrubbery, Oxford.

Cypripedium Demeter (C. G. F. Moore × C. Earl of Tankerville).—A large flower of the dark-hued set. The petals and labellum are heavily marked with dull crimson, and the large dorsal sepal with crimson blotches, set off by a dull white margin. Shown by Lieutenant-Colonel Sir George Holford, Westonbirt, Tetbury, Gloucestershire.

AWARDS OF MERIT.

Carnation Benora.—A pretty white-ground fancy of the perpetual-flowering set. The ground colour is peculiarly white and clear, the scarlet markings being thus rendered the more conspicuous. The variety is of American origin, and is sweetly scented. From Messrs. Stuart Low and Co., Bush Hill Park, Enfield.

Cattleya Tytius (C. Eud. × C. Octave Doin).—The flower is very large and handsome, the sepals and petals satiny pink; lip purplish red, feathered and reticulated with yellow and white. From Mr. H. S. Goodson, Fairlawn, Putney.

Cypripedium Idina (C. Harefield Hall × C. Countess of Carnarvon).—Sepals and petals light brown, suffused yellow; the huge dorsal sepal, which is 3½ inches across, is greenish yellow, copiously blotched with crimson and heavily bordered with pure glistening white. It is also of very thick texture. From Messrs. James Veitch and Sons, Limited, Chelsea.

Odontoglossum Scintillan (O. Rossi rubescens × O. wilckeanum).—The ground colour of the sepals and petals is purplish rose, blotched with crimson, and bordered with white in a most distinct manner. The lacerated lip is rosy purple in colour. From Mr. E. H. Davidson, Orchidene, Twyford.

Sopbro-Cattleya westfieldense (Cattleya labiata × Sopbro-Cattleya eximea).—A large flower, the sepals and petals of which are bright carmine. The labellum is large and of deeper carmine hue. Shown by Mr. F. A. Wellesley, Westfield, Woking.

Cypripedium Sir William Chance.—A large flower, with very broad and striking dorsal sepal, the centre of which is dull crimson and the outer portion glistening white. Shown by Mr. F. A. Wellesley.

Odontoglossum eximeum J. Lakin (O. ardentissimum × O. crispum).—One of the crimson-blotched varieties, with flowers of symmetrical shape and well placed on a sturdy stem. Shown by Mr. E. H. Davidson, Twyford.

Oncidium cinnabarina.—An interesting species with dull crimson flowers, these being borne mostly in clusters of three on a long, slender, arching stem. Shown by Messrs. Charlesworth and Co., Hayward's Heath.

Although there was no exhibition at the Royal Horticultural Society's Hall on December 17, the committees met as usual and the foregoing awards were made on this occasion.

THE NATIONAL ROSE SOCIETY.

ANNUAL GENERAL MEETING.

THE wonderful and ever-increasing interest that is taken in the Rose was manifested in an unmistakable manner by the large attendance of enthusiastic members at the annual general meeting of the National Rose Society, held at the Holborn Restaurant on Tuesday, the 17th inst. It speaks volumes for the excellent management of the council when we are able to record that very little of a controversial nature arose. The retiring president, the Rev. J. H. Pemberton, was in the chair, and, thanks to his business-like way of dealing with the proceedings, all matters of importance were promptly and thoroughly dealt with.

The annual report presented to the members by the council contains much that is interesting to keen lovers of the Rose and supporters of the society. The most encouraging feature is, we think, the great increase of membership. The total number of members now is 5,504, this being a net increase of 379 over last year, and an increase of 3,020 since the year 1907. The finance of the society is, happily, in an equally strong position. The total receipts during the year, including a balance of £488 15s. 10d. from last year's accounts, amounted to £4,076 18s. 9d., and after all expenses have been met and £250 placed to the reserve fund, a balance is left of £442 12s. 2d. The reserve fund now stands at £1,500. We mention these figures as indicative of the great period of prosperity that the society has enjoyed in recent years. As the president pointed out, this has no doubt been, to a large extent, due to the initiative taken by the council in recognising new types of Roses and providing exhibitions for and encouraging them in every way possible. Luckily for the society, the council has been, and is, composed of men who can appreciate the Rose in its many forms, and who are by no means strait-laced exhibitors and nothing else. The broad-minded policy adopted by the council might well serve as an object-lesson to some of our other special floral societies, whose sole aim seems to be to hold one or two shows annually.

The valuable publications, dealing fully with various phases of Rose cultivation, that are published by the society have also had a great deal to do with its popularity. For every lover of Roses who can exhibit at or attend the society's shows, there are fifty who are unable to do so, and to these in particular the publications offer a strong inducement to become members.

Regarding the future policy of the society there is not much to say. Judging by the report it is to be still a progressive one. For the first time in its history a spring show is to be held in London next year, the date being Thursday, May 1. This will enable members to see the best Roses for forcing, a most important point now that the cultivation of Roses under glass is so largely adopted. Then at the autumn show, to be held in London in September, the experiment of keeping it open two days is to be made. As Mr. Pemberton pointed out, Roses last some time in good condition at that season, and by keeping the show open late the first day many keen rosarians of the working-class will be enabled to visit the show and see the flowers they love so dearly. Mr. C. E. Shea was unanimously elected president for the next

two years, and it is interesting to record that this commences his third term of office in that capacity. The vice-presidents, hon. treasurer and hon. secretary were all re-elected, and forty-two members of council were also elected. Forty-six names were nominated and sent round to members, the unsuccessful candidates being the Rev. H. S. Arkwright and Messrs. W. R. Hammond, H. Robins and Captain W. J. Thorpe. Two personal items of interest that were dealt with at the meeting must be recorded. One was the granting of an honorarium of £100 to the hon. secretary, Mr. E. Mawley, V.M.H., whose services to the society are of a bounteous and comprehensive nature, and whose courtesy has endeared him to the hearts of all rosarians. The other was the awarding of the Dean Hole Memorial Medal to that grand old man of Rose raising and growing, Mr. George Dickson of Newtownards. This medal is the blue riband of the Rose world, and is only awarded for special and particularly valuable services rendered in the interests of the Rose. That it has been worthily bestowed no one will, we are sure, dispute.

So the National Rose Society enters upon another year full of hope and vigour. Whither its energies will lead us none can say, but so long as progress looms in the forefront of its policy, its work must tend for good.

FLOWERS FROM THE SUSSEX WEALD.

In our issue for October 26, page 547, we referred briefly to a most interesting lot of flowers that had been kindly sent us a few days previously by Mr. T. Comber, Nymans Gardens, Handcross, Sussex. Mr. Comber now sends the following particulars concerning some of them: "The flowers sent were gathered from plants growing against a south wall or in the border in front of it.

Cestrum (Habrothamnus) elegans appears likely to prove a success in this position. Its miserable appearance when grown in pots is usually due to insufficient nutriment, and it is always in better condition when placed in the border of a greenhouse or conservatory. The plant from which the flowers were cut was planted out about eighteen months ago in a corner formed by an east and a south wall. During last winter it was protected by a heap of ashes about its roots and a mat over its branches. Although the soft points of the shoots were killed, the plant soon put forth strong young shoots bearing large handsome leaves, and producing from August onwards large panicles of flowers much superior in depth of colour to those grown under glass.

Lathyrus pubescens, a native of the Argentine, has racemes of similar size and shape to those of *Lathyrus latifolius*, the common Everlasting Pea, but the flowers are of deep lavender colour. A coloured plate of this appeared in THE GARDEN for October 29, 1898. In spite of its great beauty and the fact that seed has been obtainable from Messrs. Barr and Sons for at least nine years, the plant is still uncommon. Although somewhat tender, it resents artificial heat, and is one of the many plants which can be most successfully grown when planted out. In January, 1911, we purchased a packet of seed, and the young plants were grown on in a cool house until May, when they were planted out at the foot of a south wall. Growing sturdily,

they soon attained a height of 3 feet. Early in the winter a few strong sticks, covered by a piece of coarse-meshed wire-netting, were placed at a distance of 6 inches from the plants, and the tops secured to the wall. This arrangement supported a mat in severe weather and prevented it from flapping against the plants. The pubescent nature of the plant causes moisture to cling to it, and some of the young growths decayed in consequence. The survivors grew away rapidly, reaching a height of 9 feet, and, beginning to flower in May, continued to do so until nearly the end of October.

Cyrilla racemiflora.—This American plant, growing in a border near a wall, was in late autumn covered with creamy spikes of flowers. We have had it in that position for several years, and the plant is about five feet in height and as much in diameter. In previous years it has been rather unsatisfactory, making soft, sappy growth late into the autumn, often blackened by frost in winter. It is, perhaps, due to the increased age of the plant and the warm, dry summer of 1911 that the display this year was due. The mixture of peat and loam in which it is planted appears to suit it.

Myrtus Luma (Eugenia apiculata).—The dark bronze green foliage of this Chilian Myrtle forms a rich setting to the large white flowers, whose incurved petals are delicately tinted with pink. In this neighbourhood it grows and flowers freely in the form of a bush, but in the South-Western Counties it assumes an upright tree-like growth. The shining black fruits are smaller, but have the same delicious flavour as those of *Myrtus Ugni*.

Late-flowering Heaths.—The vagaries of the weather this summer and the heavy rains in August do not appear to have adversely affected the above. During the last ten years I have never seen them flowering more freely, and to judge from the profusion of unopened buds, the display appears likely to continue for a long time. Especially is this the case with the lovely Dorset Heath (*Erica ciliaris*), its soft, downy shoots being covered with buds as well as rosy purple flowers. A dip in the ground with a slope to the north or north-west suits it exactly. We find it does best when lifted each alternate season and replanted rather deeply in light, sandy soil; roots are formed on the newly-buried stems and the plants grow with increased vigour.

A small Heath which flowers freely in autumn is the Galway Heath (*E. Maackii*); the short, upright part of the stems is densely covered with minute leaves. With us it grows most freely in a bed of peat in partial shade, but the rosy flowers are deepest in colour on the side exposed to the sun. Continuing to bloom until very late in the season, the Cornish Heath (*E. vagans*) makes up in quantity what it lacks in quality; its colour, dull bluish purple, is not very attractive. There are, besides the type, two varieties—*E. v. grandiflora*, a free-growing plant whose long stems are thickly set with flowers of the same colour as the type, and *E. v. purpurea*, which is undoubtedly the best. The latter is unique in that no other hardy Heath has flowers of the same beautiful purple. *E. multiflora* differs principally in its compact growth and the arrangement of its flowers, which are closely packed in dense corymbs at the end of the shoots. *E. m. albo-striata*, but white in colour, and the stamens are reddish brown instead of black; both are often sold under the names of *E. vagans* and *E. v. alba*.

The Cornish Heaths and their near allies are much the easiest to grow; any soil seems to suit them. I have even seen them growing vigorously in a stiff loam approaching clay, but it is advisable to mix leaf-mould with such soil when planting. October, November and March are the three best months for that operation."

ARTIFICIAL MANURES FOR THE GARDEN.

THE use of artificial manures is spreading, though, perhaps, rather slowly, to gardens, and flowers as well as vegetables are found to be quite capable of being improved and stimulated by means of fertilisers which were once, perhaps, solely associated with farming. "Patent manures" they are often still called, though the bulk of them are made by hundreds of manufacturers, with often but little difference in the prescription, and the common (often the most economical) kinds are proprietary articles. "Artificial" or "chemical" is, therefore, a better term.

It is with these commoner, and now well-known, sorts that I wish to deal, because, in the first place, they are so much cheaper; and, secondly, because the ingredients are known and appreciated. There are, of course, excellent patent brands—guanios and so forth—specially suitable to greenhouse and other valuable plants, and where knowledge of plant-life is lacking they are, perhaps, the safest to use, since a good return may be forthcoming, and no harm can be done except over-stimulation at times.

The reason for this is worth noting, and it lies in the fact that such manures are specially mixed to suit the varied requirements of plants, as regards the kind as well as the proportion of plant food. No ingredient necessary is omitted. They are, in fact, often what is known as "complete" manures, because they supply the three essential ingredients of plant food—nitrogen, phosphoric acid, often called "phosphates," and potash, or two of these constituents. It is, however, often only one of these that is specially required, and for this reason the commoner kinds, as remarked, are often more valuable, because there is not the waste, or, it may be, over-stimulation, which would be entailed by the use of a "complete" fertiliser containing more than is required. This being the case, let us glance at the uses to which these inexpensive and simpler manures can be put; but it must be remembered that, to use these correctly, some knowledge of plant nutrition is necessary.

Many plants—in fact, most—particularly need phosphates, because these are most lacking in ordinary soils; others are especially benefited by potash, though not so frequently as by phosphates, and all garden crops are partial to nitrogen. But in a garden in a good state of cultivation, phosphates are more likely to be deficient than nitrogen, while potash, especially if yard manure has been used, will often exist in plenty. Something, then, depends on the soil as well as on the individuality of the plant, and this is apt to be forgotten. People may rush to a nitrogenous manure for Roses and Carnations, and possibly get rust or grow too much leaf instead of bloom if the land is already rich, because nitrogen

is very apt to produce this effect if not used in moderation; or they may give lime when this has been already supplied in the shape of basic slag or bone-meal. Give nitrogenous manure where leaf is required, by all means, or to lawns; but give it to Nasturtiums, and the flowers will be mere adjuncts to enormous and numerous leaves.

Potash is useful for Vines, for Carrots and Parsnips, and, along with the other kinds, for fruit, Gooseberries especially, also for Asparagus, and especially for Onions. Kainit or sulphate of potash will supply it well.

Nitrogen is useful, generally speaking, for luxuriously-growing and leafy plants, hence it is excellent for such succulent stuff as Cabbage of all kinds, Lettuce that has not had yard manure (for this supplies enough if freely used), the grosser feeding pot plants and flowers of this kind; but it is much more expensive than phosphates or potash, and should be used with discretion.

There remain, then, phosphates, cheap, handy and useful as they are. It must not be expected, however, that they will give so immediate a return as nitrate of soda; for basic slag and bone-meal, for example, take some little while to become soluble. Phosphates give strength and vigour, and are excellent for Sweet Peas, but should then be applied in winter—say, bone-meal first, in a trench in January or February, or even earlier, followed by the more soluble superphosphate at seeding-time, or a few weeks before. I have found this to give excellent results, and the Sweet Peas may be grown year after year in the same ground if this plan is adopted.

A correspondent asks if superphosphate of lime is the same as the ordinary lime. It is very different. Ordinary lime is not really a manure, only a tonic to the soil, while superphosphate supplies phosphoric acid in an active form as well as some lime of a special kind, which will not take the place of the other kind. It should be applied in the early stages of growth, or at seeding-time, and so Carnations in bud, for example, would probably not benefit that season, and road scrapings, wood-ashes and rough lime are preferable.

Wood-ashes supply potash and lime, and such rough material as this and the above-mentioned is often better than richer manure. At any rate, it forms a useful foundation for many plants, and in a very cheap form. Soot or some superphosphate may be added to this, and all three constituents of plant-life are provided. Soot supplies nitrogen in a cheap and active form, and not too freely. It is useful enough for Asters and other plants, and is good mixed with water in a sack and tub. It may be used more freely than guanios, nitrate and other forcing and expensive manures, and is not so likely to have their effect—especially to be avoided in manuring flowers—of inducing a luxurious leaf-growth at the expense of blossom. Such, briefly, are some of the principles which underlie the use of mineral manures in gardens. GERVASE TURNBULL, F.L.S.

Winter Garden for Alexandra Park, Glasgow.—

We are informed that a committee of Glasgow gentlemen has been formed to promote an exhibition in the East End of Glasgow in the late autumn and winter of 1913, and to devote the surplus estimated to be realised to the provision of a winter garden for the Alexandra Park. The park is a favourite one and most valuable in that part of the city, so that a winter garden there would serve a very useful purpose.

THE GARDEN, MARCH 23, 1912.

THE GARDEN

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| 25 C. Bells, white ... 6d | 25 Pansies, Md. Perrett ... 6d | 4 Cineraria ... 6d | 2 Mock Orange ... 6d |
| 25 C. Bells, rose ... 6d | 25 Pansies, pure yellow ... 6d | 4 Cyclamen ... 6d | 2 Mountain Ash ... 6d |
| 18 C. Bells, double blue ... 6d | 25 Pansies, Snowflake ... 6d | 2 Eupatorium ... 6d | 2 Olearia Haasti ... 6d |
| 18 C. Bells, double rose ... 6d | 25 Pansies, Peacock ... 6d | 2 Fuchsia ... 6d | 1 Pyrus japonica ... 6d |
| 18 C. Bells, double white ... 6d | 25 Pansies, Cardinal ... 6d | 4 Geraniums ... 6d | 1 Portugal Laurel ... 6d |
| 9 Carnations, white ... 6d | 25 Pansies, Emperor Wm. 6d | 4 Geraniums ... 6d | 2 Privet, Golden ... 6d |
| 9 Carnations, scarlet ... 6d | 4 Paeonies, clump ... 6d | 4 Heliotrope ... 6d | 1 Pyraeantha ... 6d |
| 9 Carnations, named ... 6d | 6 Pentstemonus ... 6d | 3 Streptocarpus ... 6d | 6 Raspberries ... 6d |
| 6 Chrys. Max. Mrs. L. ... 6d | 4 Phlox, white ... 6d | 4 Salvia ... 6d | 2 Rhododendrons ... 6d |
| Bell or King Edward ... 6d | 4 Phlox, red ... 6d | 6 Tradescantia ... 6d | 2 Ribes, red ... 6d |
| 9 Campanula, blue ... 6d | 6 Phytalis Franchetti ... 6d | 4 Umbrel. Palmus ... 6d | 2 Ribes, yellow ... 6d |
| 9 Campanula, white ... 6d | 4 Physastigia ... 6d | 2 Acacia Trees ... 6d | 2 Rosemary ... 6d |
| 6 Campanula Pyram. ... 6d | 6 Pinks, Her Majesty ... 6d | 1 Acer Tree ... 6d | 1 Rhubarb stool ... 6d |
| 6 Campanula Carpatica ... 6d | 6 Pinks, Sam Barlow ... 6d | 1 American Blackberry 6d | 1 Rhododendron ... 6d |
| 4 Catch-fly, double ... 6d | 9 Pinks, Mrs. Sinkins ... 6d | 1 Ampelopsis Veitchii ... 6d | 2 Sweet Briars ... 6d |
| 9 Chelone barbata ... 6d | 9 Pinks, Modesto ... 6d | 2 Ampelopsis Hedra ... 6d | 2 Snowberry ... 6d |
| 12 Cistus, Rock ... 6d | 9 Pinks, Paddington ... 6d | 2 Aucuba japonica ... 6d | 12 Strawberry ... 6d |
| 18 Coreopsis ... 6d | 9 Pinks, Alice Lee ... 6d | 1 Azalea ... 6d | 2 Southernwood ... 6d |
| 9 Cornflower, perennial 6d | 9 Pinks, double mixed ... 6d | 2 Berberis Darwin ... 6d | 2 Spirea, red ... 6d |
| 12 Daisies, Monstro. white 6d | 25 Pinks, Pheasant-eyed 6d | 1 Berberis Purpurea ... 6d | 2 Spirea, white ... 6d |
| 12 Daisies, Monstro., red 6d | 12 Polygonum ... 6d | 2 Broom, white ... 6d | 2 Spirea, pink ... 6d |
| 12 Daisy Monstrosa ... 6d | 12 Polyanthus ... 6d | 2 Broom, yellow ... 6d | 2 Thuja gigant. ... 6d |
| 3 Dielytra spectabilis ... 6d | 12 Poppies, Oriental ... 6d | 2 Currants, red ... 6d | 6 Tomato Plants ... 6d |
| 12 Dianthus, double ... 6d | 6 Potentilla ... 6d | 2 Currants, white ... 6d | 1 Tree of Heaven ... 6d |
| 6 Delphiniums ... 6d | 6 Pyrethrums ... 6d | 2 Clematis, blue ... 6d | 2 Tulip Tree ... 6d |
| 9 Doronicums ... 6d | 6 Ribbon Grass ... 6d | 2 Clematis, white ... 6d | 2 Veronica ... 6d |
| 12 Erigeron spec. ... 6d | 12 Rockets, Sweet ... 6d | 2 Clematis, yellow ... 6d | 2 Vine, variegated ... 6d |
| 12 Gaillardias ... 6d | 3 Rudbeckia pur. ... 6d | 1 Clematis montana ... 6d | 1 Walnut Tree ... 6d |
| 9 Geums, scarlet ... 6d | 3 Rudbeckia Newmanii 6d | 2 Cupressus ... 6d | 1 Weigela, scarlet ... 6d |
| 6 Golden Rod ... 6d | 6 Salvia Argent. ... 6d | 2 Deutzia, rose ... 6d | 1 Weigela, white ... 6d |
| 9 Gypsophila, white ... 6d | 12 Saponaria Ocyroid ... 6d | 2 Deutzia, white ... 6d | 1 Weigela, pink ... 6d |
| 9 Gypsophila, pink ... 6d | 3 Scabiosa Caucas. ... 6d | 2 Enonymus ... 6d | 1 Wisteria ... 6d |
| 4 Hemerocallis ... 6d | 6 Sidalea, white ... 6d | | |

OUTDOOR CHRYSANTHEMUM PLANTS, WELL ROOTED. Blush Beauty (pink), Champ d'Or (yellow), Carrie (golden), Enchantress (white), Goachers' Crimson (red), Hermione (orange), Lizzie Adcock (deep yellow), Marie Masse (yellow), Marie Masse (pink), Madame Desgrange (white), 1/- doz. of any of the above.

INDOOR CHRYSANTHEMUMS, WELL ROOTED.—Chivera's Donage (yellow), La Triumph (pink), Mons. Gerwood (red), Nellie Pockett (white), Soliel d'Or (bronze), W. H. Lincoln (deep yellow), 1/- dozen of any of the above. Choice large-flowering varieties, novelties, 2/- doz.

ROSES.—Teas and II. Teas, 5d. each, 4/- doz.; H.P.'s, 4d. each, 3/- doz.; Climbers from 6d. to 1/- each; Polyantha, 4d. each, 3/- doz.; Moss, 5d. each, Standards, 1/6 each. Send along names, we can supply. All strong English grown.

We pay carriage on all 5/- orders for plants and 10/- orders for Shrubs and Roses. Please give FULL post and rail address. Send for our descriptive Catalogue free on application.

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THE BEST AND CHEAPEST.

Special Pots for Chrysanthemums, Roses, Vines, Clematis, Orchids, etc.

Fancy Fern Pans & Bulb Bowls from 2d. each
State quantity of each size required and have carriage paid quotation (carriage is sometimes as much as 50% of value of pots) or write for Price List—free.

RICHARD SANKEY & SON, Limited Bulwell Potteries, NOTTINGHAM

THE GARDEN

A WEEKLY
ILLUSTRATED JOURNAL FOR GARDEN
ORCHARD AND WOODLAND

SATURDAY, MAY 4, 1912.

VOL. LXXVI. No. 2111.

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AURICULAS
TO BUY NOW

MRS. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD 26th SEASON.

Known all over the World where Plants, Bulbs and Trees can be sent. Thousands upon thousands of Testimonials for Quality, Packing, Freshness and Safe Arrival.

A FEW TESTIMONIALS JUST RECEIVED, WORTHY TO BE WRITTEN IN LETTERS OF GOLD.

J. B. HOUGHTON, Esq., Runcorn, writes, April 13th: "Plants to hand in good order and condition. I must congratulate you on the excellent way the goods were packed. It reflects very great credit on those responsible for the work."

Mrs. GLOSSOP, Whitechapel Manor, S. Moltou, writes, April 16th: "Many thanks for plants. They arrived quite beautifully packed, and are now all planted, and look as fresh as if they had never been removed."

J. WILDT, Esq., "The Limes," Gravesend, writes, April 4th: "Plants arrived this afternoon. I am delighted with them. They are strong, sturdy, and in the pink of condition, splendidly packed, and beautifully fresh. I have come to the conclusion after all where to buy my stock."

The above original letters can be seen in my office, and thousands of similar ones, Gained by Sheer Merit and Superlative Value.

WHAT MORE CAN BE SAID OF ANY PLANTS OR TREES? WHY RISK DISAPPOINTMENT?

Why bother with Stocks, Asters, and other Annuals, which only last a few months, when you can purchase at a mere nominal price Hardy Perennial Plants, which will increase and last a lifetime?

HARDY PERENNIAL AND HERBACEOUS PLANTS

are those whose foliage dies to or near the ground each autumn, coming forth again with renewed vigour the following spring. There are yet but few who secure the best results from open-air gardening, while anyone with a few rods of ground may enjoy a beautiful and permanent flower garden by planting these herbaceous or perennial plants; their first cost is the only cost, as they increase in size and beauty from year to year. The varieties described will succeed each other and give flowers from each spring until cut down by frost in autumn, and make the garden a source of unflagging interest. With slight attention to their selection, varieties may be had for any condition of soil: wet, dry, sunny or shady—there are plants for all.

COLLECTION OF PLANTS for sunny borders, shady borders, rockery, Tall Plants for back of borders, or Dwarf Plants for front of borders, 5/-, 10/-, 15/- and 21/-. Packed free and carriage paid. Also Collection for Greenhouse, 2/6, 5/-, 10/-, and 15/-, carriage paid.

These collections will be found wonderful value, and have given hundreds of my customers something more than mere satisfaction; they have been delighted.

TRITOMA UVARIA GRANDIFLORA (FLAMING TORCH OR RED-HOT POKER PLANT).—A splendid hardy summer and autumn flowering plant, producing magnificent spikes of rich orange-red flowers. A large specimen is very beautiful, with its many long, narrow, recurved leaves, which are crowned in midsummer and autumn with long crowded spikes of fiery tubular flowers, borne high above the foliage on stiff ramrod-like stalks. At a little distance the close heads of flaming orange and red flowers are very striking, and have earned the plant the common name of "Red-hot Poker." 3 for 1/3; 6 for 2/-; 12 for 3/6.

THE HARDY CRIMSON SPIRÆA.—This lovely dwarf Spiræa appears to be but little known, yet its merits deserve extensive cultivation; it is perfectly hardy, and flowers till late in the autumn. The flowers cover the path in dense clusters, and have a soft feathery appearance, which makes them extremely attractive and beautiful. A bed or border of these make a beautiful show, and take care of themselves year after year. Having a good stock I offer cheap. All two years old, grown in the open ground. 6 for 1/9; 12 for 3/-; 25 for 5/6; 50 for 10/-.

PENTSTEMON BARBATA.—Superb spikes of splendid coral red bloom; doubtless one of the finest hardy perennials that can be grown, it produces an effect that is brilliant but refined, and the graceful beauty of the plant adds much to its charms. 6 for 1/6; 12 for 2/6.

SPECIAL OFFER, MIXED CARNATIONS.—All strong autumn rooted layers, to bloom abundantly this year. Having lost the names and got several lots mixed up; these are from my splendid collection of yellow, crimson, white, scarlet, pink, purple and white, etc. Many amongst this lot worth from 1/- to 2/6; 6 for 2/-; 12 for 3/6; 25 for 6/6.

FOR TREE STRAWBERRY AND THE LOVELY BRUGMANSIA KNIGHTII, see page iii. last week.

ALL PACKED FREE AND CARRIAGE AND POSTAGE PAID TO YOUR DOOR.

New Catalogue of Delicious Fragrant Japanese Pæonies, Lilies, Carnations, Giant Flowering Clematis, and other Glorious Hardy Climbers and Herbaceous Plants in bewildering variety, Gratis and Post Free.

Mrs. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD

HARDING & HARRIS, The Renowned Plant Growers,

This week offer the following Special List of Garden Plants.

NOTE.—The Plants we supply are the Best you can Buy.

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| 24 Achillea | 6d |
| 30 Antirrhinum | 6d |
| 6 Auriculas | 6d |
| 30 Asters | 6d |
| 1 Anemopsis | 6d |
| 12 Arabis, double | 6d |
| 4 Begonias | 6d |
| 28 Canterbury Bells | 6d |
| 12 Carnations | 6d |
| 16 Chrysanthemums maximum | 6d |
| 3 Chrysanthemums for pots | 6d |
| 50 Cornflowers | 6d |
| 1 Cupressus | 6d |
| 3 Clematis | 6d |
| 50 Daisies, red or white | 6d |
| 18 Delphiniums | 6d |

| | |
|----------------------|----|
| 3 Dahlias, Cactus | 6d |
| 12 Dahlias, mixed | 6d |
| 6 Evening Primrose | 6d |
| 25 Gaillardias | 6d |
| 18 Gypsophila | 6d |
| 12 Geums, scarlet | 6d |
| 12 Hollyhocks | 6d |
| 1 Honeysuckle | 6d |
| 20 Iceland Poppies | 6d |
| 6 Lobelia cardinalis | 6d |
| 25 Lobelia, blue | 6d |
| 20 Lupins | 6d |
| 1 Lavender | 6d |
| 8 Mrs. Sinkins Pinks | 6d |
| 25 Malope | 6d |
| 9 Oriental Poppies | 6d |

| | |
|-----------------------------|----|
| 30 Pansies | 6d |
| 12 Sweet Peas (Everlasting) | 6d |
| 60 Sweet Peas, grandiflora | 6d |
| 25 Stocks | 6d |
| 6 Scarlet Musk | 6d |
| 25 Sunflowers | 6d |
| 25 Sweet Sultans | 6d |
| 12 Verbenas | 6d |
| 60 Wallflowers | 6d |
| 25 Celery, red or white | 6d |
| 50 Cauliflower | 6d |
| 2 Cucumbers (Frame) | 6d |
| 6 Cucumbers (Ridge) | 6d |
| 80 Broccoli | 6d |
| 6 Marrows | 6d |
| 6 Tomatoes | 6d |

| GREENHOUSE PLANTS | |
|---------------------------------------|----|
| 2 Aralia Sieboldi | 6d |
| 2 Arum Lilies | 6d |
| 6 Bridal Wreath | 6d |
| 3 Begonias | 6d |
| 6 Campanulas | 6d |
| 6 Fuchsias, single or double | 6d |
| 6 Gloxinias | 6d |
| 6 Marguerites, white, blue, or yellow | 6d |
| 2 Petunias, double | 6d |
| 6 Scarlet Salvias | 6d |
| 10 Tobacco Plants | 6d |

All Plants Carefully Named, Packed, and Free on Rail.

HARDING & HARRIS (Est. 30 Years), Nurserymen, WEST HADDON, RUGBY.

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AN
EASILY-GROWN
CLEMATIS

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26th SEASON.

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Mrs. Griffiths, Sedlescombe Road, St. Leonards-on-Sea, writes, May 4th: "Mrs. Griffiths wishes to thank Mrs. Gardner for the splendid plants sent, and for the very generous quantity, they were beautifully packed and arrived in excellent condition."

The above original letters can be seen in my office, and thousands of similar ones, gained by sheer merit and superlative value. WHAT MORE CAN BE SAID OF ANY PLANTS OR TREES? WHY RISK DISAPPOINTMENT?

LILIUM AURATUM

The Golden-Banded Queen of Lilies.

Ivory white ground, richly strewn with purple studs. The centre of each petal has a broad band of yellow extending from tip to base. I offer this season a large stock of this peerless variety, which, beyond question, is the grandest of all the Lily family. Fully expanded the flowers measure 12in. to 15in. across, are produced abundantly, and possess a most delicious fragrance. 3 for 1/9, 6 for 3/-; 12 for 5/-; selected, 3 for 2/6; 6 for 4/6; 12 for 8/6; extra heavy giant bulbs. Can be potted for the greenhouse or planted in the open border at once. They are perfectly hardy, and when planted among Roses, any odd nooks round the lawn, or to fill up gaps in the herbaceous border, will reward you with blossoms in autumn that nothing else can equal. When thoroughly established they throw up 70 to 80 gigantic flowers on a spike.

Mr. Eddas, gardener, Widworthy, writes, April 7th: "I am sending order for more Auratums. I took first prize with those I had from you last year."

MAGNIFICENT MIXED LILIES.—Embracing beautiful and distinct varieties, which, both for pot culture and for masses of colour in the open garden, are unsurpassed. They are very hardy, and grow and thrive under almost any conditions. 6 for 2/-; 12 for 3/6; 25 for 6/6.

Mrs. Fry, Tunbridge Wells, writes, April 15th: "I am sending you another order for Lilies. Those I had last year were very lovely, and so much admired."

Mrs. Barrett, Wolverhampton, writes, May 4th: "The Lilies I had from you last season were very beautiful and greatly admired by all."

CLEMATIS DAVIDIANA.—This is a lovely species of Clematis, growing in bush from 3ft. or 4ft. high, and yielding through the summer great panicles of lovely blue flowers, which are exceedingly handsome and very fragrant. The foliage is large and luxuriant, and the plant is, all in all, one of exceptional beauty. It is perfectly hardy in any locality, and blooms profusely when only 1ft. high. This lovely bush Clematis will be a rare attraction in any garden or border. Plant out splendidly now. Bargain price, 3 for 2/-; 6 for 3/6; 12 for 6/-.
For special offer of Hybrid Gladiolus and the famous Blue Gladiolus, see page iii. last week. All above Packed Free and Carriage Paid.

SPECIAL OFFER, MIXED CARNATIONS.—All strong autumn rooted layers, to bloom abundantly this year. Having lost the names and got several lots mixed up; these are from my splendid collection of yellow, crimson, white, scarlet, pink, purple and white, etc. Many amongst this lot worth from 1/- to 2/6; 6 for 2/-; 12 for 3/6; 25 for 6/6.

CRIMSON CLOVE CARNATIONS.—The true old delicious spice-scented variety, now very scarce. Healthy, well-rooted plants, 3 for 1/3, 6 for 2/3, 12 for 3/6.

A GLORIOUS LARGE YELLOW CARNATION, hardy, free-flowering, vigorous growing; finest yellow in cultivation. 3 for 1/6, 6 for 2/3, 12 for 4/-.

HYBRID PENTSTEMONS.—For grand display in border, plant some of my new hybrid Pentstemons, which are now rich in variety of colour, in size almost equal to glloxinias, and have superbly splashed and mottled throats; they are quite hardy, and bloom the whole season. 6 for 2/-; 12 for 3/6.

HARDY OUTDOOR CHRYSANTHEMUMS.—Every body likes these: splendid colours; grand for cutting in autumn; perfectly hardy. Grand, well-rooted plants. Succeed anywhere planted out now. 6 for 1/3; 12 for 2/3; 25 for 4/-. Give armfuls of glorious blossoms for cutting when flowers are scarce in autumn.

Miss Coxhead, Newbury, writes, May 1st: "The Chry" santhemums I got from you last year gave me great pleasure and satisfaction."

HYBRID PYRETHRUMS, or Hardy French Marguerites.—Large, handsome flowers, of many rich and beautiful colours, including white, cream, pink, cardinal, and many other shades to rich crimson. Never fail to give pleasure wherever planted. 6 for 1/6; 12 for 2/6.

DOUBLE PYRETHRUMS, Rose-du-Barri.—A Superb Pink variety, very hardy and free-flowering. 3 for 1/3; 6 or 2/-; 12 for 3/6.

THE BLUE SPIRÆA (Cariopteris).—A lovely blue hardy perennial, covered with a mass of blue flowers all the season. Certain to become very popular, and be grown by thousands when known. These plants were a sight not readily forgotten last year, the drought and heat just suiting it. It really belongs to the Verberna family, and the foliage has that peculiar all-spice kind of fragrance liked by all. 3 for 1/6; 6 for 2/6; 12 for 4/-. Now best time to plant. Try a bed of these for a change and you will be delighted.

COLLECTION OF PLANTS for sunny borders, shady borders, rockery, Tall Plants for back of borders, or Dwarf Plants for front of borders, 5/-, 10/-, 15/- and 21/-. Packed free and carriage paid. Also Collection for Greenhouse, 2/6, 5/-, 10/-, and 15/-, carriage paid.

HELIOTROPE LORD ROBERTS.—Magnificent rich dark blue variety, deliciously fragrant, grand for greenhouse or bedding. 6 for 1/3; 12 for 2/-; 25 for 3/6. Grand hardy plants from outdoors.

HYBRID PENTSTEMONS.—For grand display in border, plant some of my new Hybrid Pentstemons, which are now rich in variety of colour, in size almost equal to Glloxinias, and have superbly splashed and mottled throats; they are quite hardy and bloom the whole season. Grand large plants. Bargain price, 6 for 1/9; 12 for 2/9; 25 for 5/- 100 for 17/6.

ICELAND POPPIES.—Perennials, but bloom first year. Very handsome and graceful, and particularly desirable, because they furnish us with a colour hitherto lacking in these flowers. The yellow and orange shades are particularly fine, and the white is very pure. 6 for 1/3; 12 for 2/-.

POTENTILLA CRIMSON QUEEN.—A true perennial, and magnificent for summer bedding; beautiful blossoms of deep rich velvety crimson, blooming the whole summer. Having a grand stock, I offer at less than half price. 12 for 1/6; 25 for 2/9; 50 for 5/-.

PENTSTEMON BARBATA.—Superb spikes of splendid coral red bloom; doubtless one of the finest hardy perennials that can be grown, it produces an effect that is brilliant but refined, and the graceful beauty of the plant adds much to its charms. 6 for 1/6; 12 for 2/6.

Another Grand Bedding Plant.
VIOLA MAUVE QUEEN.—This is a delightful shade of colour, soft, elegant, and extremely beautiful; plants simply a mass of blossom all the season. 12 for 2/-; 25 for 3/6; 50 for 6/-.

MRS. CHICHESTER.—Another lovely Viola, cream with heliotrope border, large bold upstanding blossom. King of the Blues, most brilliant of all blue Violas. Both above same price as Mauve Queen.

Also Violas in the following colours: light blue, dark blue, yellow, crimson and cream, with heliotrope border; either colour, 2/- doz.; 25 for 3/6; or all colours, mixed, 1/9 doz.; 25 for 3/-.

Mrs. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD

CHRYSANTHEMUMS, Outdoor, Early flowering.—Why grow old, inferior kinds? Thousands of fine plants (not scraps) for immediate planting, in finest large-flowering recent varieties, varied lovely colours, named, 2/- doz.; 25 for 3/6; 50 for 6/-; 100 for 10/6; without names, 50 for 3/6; 100 for 5/-. Grand Value. New varieties gratis with every order. This splendid new 1911 set of 20 fine plants, correctly named, 6/-, free; two each, 10/6; Alan, Brightness, Bronze Goacher, Helena, Cherry, Bella McNeil, Beauty, Crimson Grunnerwald, Galatea, Orange Queen, Novelty, Gertie Gosney, Orion, Climax, Vulcan, Perfection, Verona, Grosvenor, Brighton, Reindeer.—E. COLNETT, 61, Wyndham Crescent, Cardiff. (Twenty-first season.)

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SUMMER BEDDING

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| <p>ANTIRRHINUMS BEGONIAS CENTAUREAS DIANTHUS HELIOTROPES</p> | <p>NEMESIAS NICOTIANAS PENTSTEMONS SALVIAS VERBENAS</p> |
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Write for List—Gratis and Post Free.

C. S. DANIELS & SON
 WYMONDHAM, NORFOLK.

HARDING & HARRIS, The Renowned Plant Growers,

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GREENHOUSE PLANTS

| | |
|---|---|
| <p>2 Aralia Sieboldi 6d</p> <p>2 Arum Lilies 6d</p> <p>6 Bridal Wreath 6d</p> <p>3 Begonias 6d</p> <p>6 Campanulas 6d</p> <p>6 Fuchsias, single or double 6d</p> <p>2 Glloxinias 6d</p> <p>6 Marguerites, white, blue, or yellow 6d</p> <p>2 Petunias, double 6d</p> <p>6 Scarlet Salvias 6d</p> <p>10 Tobacco Plants 6d</p> | <p>6 Marrows 6d</p> <p>100 Savoy, dwarf, green curled 6d</p> <p>100 Scotch Kale 6d</p> <p>6 Tomatoes 6d</p> |
|---|---|

Any Lot Divided to Suit Purchasers. All Plants Carefully Named, Packed, and Free on Rail. Our Summer Bedding List is Now Ready, Gratis and Post Free

HARDING & HARRIS (Est. 30 Years), Nurserymen, WEST HADDON, RUGBY.

THE GARDEN



Double-
Number

SATURDAY,

MAY 25, 1912.

VOL. LXXVI. No. 2114.

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A BEAUTIFUL
CLIMBING ROSE.

Brugmansia Knightii.

Produces the sweetest and most delicious fragrance of any flower on earth.

Called also Angels' Trumpets and Wedding Bells. One of the grandest hard-wooded plants I know of, and easy to grow. It grows several feet high, and is quite bushy. The foliage is large and tropical, and its bloom—how shall I describe what words cannot picture? Imagine a little bush three feet high, and with 20 or 30 pendulous blooms open at once; great creamy-white blooms, 11in., 12in., or 13in. long, and 8in. wide, of a texture resembling thick fluted satin. Imagine these creamy trumpets pouring fragrance forth till the air is heavy with sweetness. Imagine all this, then remember the blossoms last for days in perfection, and that new buds are constantly coming on; it is quite as easy to grow as a geranium or fuchsia, and requires the same treatment. A good plant in the garden during the summer is the talk of the neighbourhood. STOCK LIMITED.

Strong plants, one or two years old, **5** -, **7 6** and **10 6** each.

Strong plants grown this season **2 6** each.

Can be grown in greenhouse all the year round, or planted out for the summer.

NOW BEST TIME TO POT OR PLANT OUT.

ALL PLANTS SENT WITH BALL OF EARTH. NO CHECK.

Read what Mr. LEIGHTON, Kilmarnock, says about this glorious plant:—"I am delighted to tell you how beautiful the Brugmansia has been in the greenhouse. During spring it flowered abundantly, having 27 blossoms out at one time. Then I put it outdoors for the summer, where it has been blooming all the time, and had 30 blossoms out at once."

LILIUM AURATUM. The Golden-Banded Queen of Lilies.

Ivory white ground, richly strewn with purple studs. The centre of each petal has a broad band of yellow extending from tip to base. I offer this season a large stock of this peerless variety, which, beyond question, is the grandest of all the Lily family. Fully expanded, the flowers measure 12in. to 15in. across, are produced abundantly, and possess a most delicious fragrance. 3 for 1 9; 6 for 3 -; 12 for 5 -. Selected, 3 for 2 6; 6 for 4 6; 12 for 8 6; extra heavy giant bulbs. Can be potted for the greenhouse or planted in the open border at once. They are perfectly hardy, and when planted among Roses, any odd nooks round the lawn, or to fill up gaps in the herbaceous border, will reward you with BLOSSOMS IN AUTUMN THAT NOTHING ELSE CAN EQUAL. When thoroughly established they throw up 70 to 80 gigantic flowers on a spike.

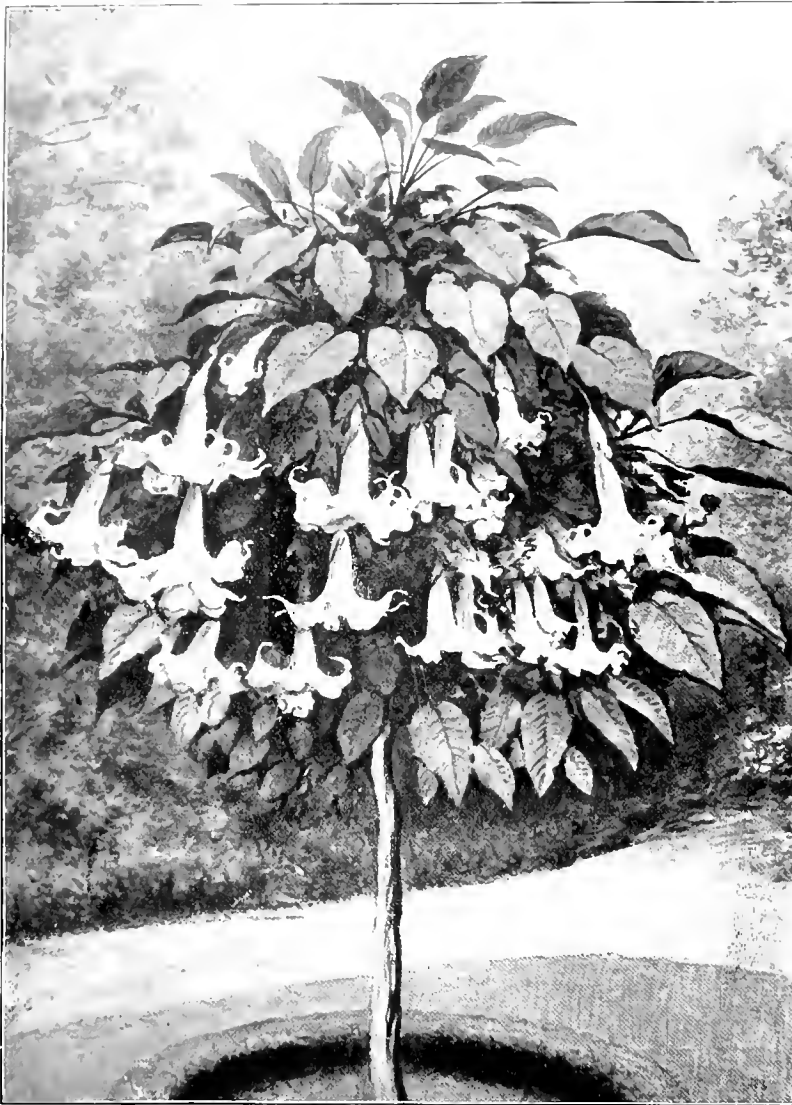
Mr. EDDAS, gardener, Widdoworth, writes, April 7th: "I am sending order for more Auratums. I took first prize with those I had from you last year."

MAGNIFICENT MIXED LILIES.

Embracing beautiful and distinct varieties, which, both for pot culture and for masses of colour in the open garden, are unsurpassed. They are very hardy, and grow and thrive under almost any conditions. 6 for 2 -; 12 for 3 6; 25 for 6 6.

Mrs. FRY, Tunbridge Wells, writes, April 15th: "I am sending you another order for Lilies. Those I had last year were very lovely, and so much admired."

Mrs. BARRETT, Wolverhampton, writes, May 4th: "The Lilies I had from you last season were very beautiful and greatly admired by all."



Photo, Merrett Bros., Stroud.

BRUGMANSIA KNIGHTII.

Giant Flowering Gladiolus!

THE GLADIOLUS is the most satisfactory, the most desirable, and the most popular of all garden bulbs. Nothing else of the kind costs so little, and nothing else grows and blooms so readily for anybody and everybody, in any soil or climate. It is, in short, the most satisfactory garden flower, thriving and blooming, as it does with the least care and attention, and makes a display which for brilliancy and beauty of colouring few bulbs can equal and none surpass. The Gladiolus is to the flower garden what bread is to man, "The staff of life."

NOW FIRST OFFERED BY ME. GOLDEN VALLEY STRAIN OF GIANT FLOWERING NEW AND IMPROVED HYBRIDS.

The quality of these magnificent Hybrid Gladiolus has by great care and selection been immensely improved, and the Golden Valley Mixture will be a great advance in spite of spike and individual flowers, substance, freedom of growth; and the many new shades and splendid forms that will appear among them—far more beautiful and intensely deep, rich colours than anything that has hitherto been seen in the finest Gladioli. This new type is exceptionally free-flowering, producing bold, massive spikes, with unusually large blossoms of great substance and exquisite colours. No garden should be without these stately and noble flowers. Incomparably brilliant and majestic, and so easy of culture that they will grow in any position and in all soils and situations, producing glorious effects in absolutely endless combinations of the most brilliantly magnificent colours imaginable, ranging through all the known shades, and embracing many quite novel and intensely beautiful floral developments. Grand for exhibition. 6 for 1 6; 12 for 2 6; 25 for 4 6; 50 for 8 6; 100 for 16 -. A few EXTRA GIANT BULBS of this grand new strain, 6 for 2 -; 12 for 3 6.

Extract from "Garden Life."—"There is an extra fine sort, known as the Golden Valley strain, which reaches a height of 4ft. or 5ft., and bears spikes of blooms over 2ft. in length, the individual flowers frequently measuring 7in. to 9in. These new and improved hybrids possess the further merit that they are very free-flowering, and of intensely rich and brilliant colours."

THE MOST FAMOUS GLADIOLUS OF ALL IS MY BLUE GLADIOLUS.

"Amateur Gardening" says: "The colour is grand." Not a pale, weak, or washed-out blue, but true, deep, rich blue, of such sterling merit as to cause a sensation wherever grown or shown. It is a colour absolutely distinct. The flowers are large and bold; and so beautiful as to be absolutely peerless amongst Gladioli. Perfectly hardy, and should be planted in the open border at once. **NOW REDUCED IN PRICE, SO THAT ALL MAY GROW THIS GLORIOUS GLADIOLUS.** 3 for 2 6; 6 for 1 6; 12 for 8 -.

See page ii. last week for other grand bedding plants, etc. Everything packed free and carriage paid.

Grand New Michaelmas Aster.

BEAUTY OF COLWALL.

NOW FIRST OFFERED BY ME.

The first double variety. Flowers perfectly double, of a very pleasing shade of lavender, produced in great freedom on stout erect stems about 4ft. high. It is of robust constitution and a good grower, and requires no staking or tying to keep in position. Awarded a first-class certificate by the Royal Horticultural Society. 1 6 each; 3 for 4 -; 6 for 7 6.

A Remarkable Plant.—LIATRIS PYCNOSTACHYA (Kansas Gay Feather, Blazing Star, etc.)

It begins to bloom at the top of the spike, going downwards progressively, and remains in bloom for quite two months. It is a true perennial, and will increase and last for years. 3 for 1 6; 6 for 2 6 (usual price 1 - each).

HARDY OUTDOOR CHRYSANTHEMUMS.

Everybody likes these; splendid colours; grand for cutting in autumn; perfectly hardy. Grand, well-rooted plants. Succeed anywhere planted out now. 6 for 1 3; 12 for 2 3; 25 for 4 -. Give armfuls of glorious blossoms for cutting when flowers are scarce in autumn.

GIANT-FLOWERED HYBRID CLEMATIS.

The Clematis I offer this season are exceptionally fine, strong plants, two years old. For covering walls, trellises and verandahs, old trees, etc., they have scarcely an equal, and certainly no superior. Huge blooms as large as tea saucers, and of the most brilliant colours imaginable, from pure white to rich crimson. Bargain price, 3 for 2 6; 6 for 4 6; 12 for 7 6. All different colours; usual price, 18/- to 24/- doz.

PENTSTEMON BARBATA.

Superb spikes of splendid coral red bloom; doubtless one of the finest hardy perennials that can be grown, it produces an effect that is brilliant but refined, and the graceful beauty of the plant adds much to its charms. 6 for 1 6; 12 for 2 6.

Mrs. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD

THE GARDEN

A WEEKLY
ILLUSTRATED JOURNAL FOR GARDEN
ORCHARD AND WOODLAND

SATURDAY, JUNE 8, 1912.

OL. LXXVI. No. 2116.

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JUN 22 1912
Agricultural
College



VIOLETTAS.

MRS. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD. 26th SEASON.

Known all over the World where Plants, Bulbs and Trees can be sent. Thousands upon thousands of Testimonials for Quality, Packing, Freshness and Safe Arrival. T. W. Hanshaw, Esq., Anerley, London, writes, May 16th, 1912:—"Enclosed is cheque and order for further supply of Lilies, etc. I think it is only fair to compliment you on the splendid condition of the bulbs and plants when received, and at the same time to say a word of praise with regard to the manner in which they were packed, it cannot be improved upon I am sure. It may interest you to know that my gardener says 'the plants and bulbs I get from Priory House are always miles ahead of those which I order elsewhere.'"

The above original letter can be seen in my office, and thousands of similar ones, gained by sheer merit and superlative value. **MAGNIFICENT MIXED LILIES.**—Embracing beautiful and distinct varieties, which, both for pot culture and for masses of colour in the open garden, are unsurpassed. They are very hardy, and grow and thrive under almost any conditions. When planted among Roses, say odd nooks round the lawn, or to fill up gaps in the herbaceous border, will reward you with blossoms in autumn that nothing else can equal. 6 for 1/9; 12 for 2/6; 25 for 4/6.

Mrs. FRY, Tunbridge Wells, writes, April 15th: "I am sending you another order for Lilies. Those I had last year were very lovely, and so much admired."

Mrs. BARRETT, Wolverhampton, writes, May 4th: "The Lilies I had from you last season were very beautiful and greatly admired by all."

CLEMATIS DAVIDIANA.—This is a lovely species of Clematis, growing in bush from 3ft. or 4ft. high, and yielding through the summer great panicles of lovely blue flowers, which are exceedingly handsome and very fragrant. The foliage is large and luxuriant, and the plant is, all in all, one of exceptional beauty. It is perfectly hardy in any locality, and blooms profusely when only 1ft. high. This lovely Bush Clematis will be a rare attraction in any garden or border. Plant out splendidly now. Bargain price, 3 for 2/-; 6 for 3/6; 12 for 6/-.

HYBRID PENTSTEMONS.—For grand display in border, plant some of my new Hybrid Pentstemons, which are now rich in variety of colour, in size almost equal to Gloxinias, and have superbly splashed and mottled throats; they are quite hardy and bloom the whole season. Grand large plants. Bargain price, 6 for 1/9; 12 for 2/9; 25 for 5/-; 100 for 17/6.

ANTIRRHINUM.—Something new. Little Bo-Peep Antirrhinums, or the real Tom Thumb; they only grow about six inches high, and are one mass of bloom for months; white, cream, yellow, to rich blood red; and will bloom till severe frost; and start again in early spring. 6 for 1/3; 12 for 2/-.

Also Antirrhinum grandiflora, the new tall giant; monster flowers. Same price as Tom Thumb.

CACTUS DAHLIAS.—Fine large plants, lovely colours; grown from best varieties and seedlings. Bargain Price, 6 for 1/6; 12 for 2/9; 25 for 5/-.

FOR THE GLORIOUS BRUGMANSIA, GLADIOLUS, NEW ASTER, AND OTHER PLANTS OF SPECIAL

HARDY OUTDOOR CHRYSANTHEMUMS.—Every body likes these; splendid colours; grand for cutting in autumn; perfectly hardy. Grand, well-rooted plants. Succeed anywhere planted out now. 6 for 1/3; 12 for 2/3; 25 for 4/-. Give armfuls of glorious blossoms for cutting when flowers are scarce in autumn.

Miss COXHEAD, Newbury, writes, May 1st: "The Chrysanthemums I got from you last year gave me great pleasure and satisfaction."

THE BLUE SPIRÆA (Cariopteris).—A lovely blue hardy perennial, covered with a mass of blue flowers all the season. Certain to become very popular, and be grown by thousands when known. These plants were a sight not readily forgotten last year, the drought and heat just suiting it. It really belongs to the Verbena family, and the foliage has that peculiar all-spice kind of fragrance liked by all. 3 for 1/6; 6 for 2/6; 12 for 4/-. Now best time to plant. Try a bed of these for a change and you will be delighted.

HELIOTROPE "LORD ROBERTS."—Most fragrant and delicious bedding variety, rich dark blue, dwarf, compact habit, the very finest of all bedding heliotrope on account of its exceedingly free flowering habit. Fine sturdy plants from the open. 6 for 1/3; 12 for 2/-; 25 for 3/6.

GRAND BEDDING VIOLAS.—Most superb colours, splendid sturdy plants, full of buds, will be a mass of blossom all the season. 12, 1/9; 25 for 3/-. Very scarce this season.

NEW MAMMOTH "PRIORY STRAIN" OF PANSIES. now offered for first time; same price as Violas; colours of indescribable beauty.

COLLECTION OF PLANTS for sunny borders, shady borders, rockery, Tall Plants for back of borders, or Dwarf Plants for front of borders, 5/-, 10/-, 15/- and 21/-. Packed free and carriage paid. Also Collection for Greenhouse, 2/6, 5/-, 10/-, and 15/-, carriage paid.

THE MOST FAMOUS GLADIOLUS OF ALL IS MY BLUE GLADIOLUS.—Amateur Gardening says: "The colour is grand." Not a pale, weak, or washed out blue, but true, deep, rich blue, of such sterling merit as to cause a sensation wherever grown or shown. It is a colour absolutely distinct. The flowers are large and bold; and so beautiful as to be absolutely peerless amongst Gladiolus. Perfectly hardy, and should be planted in the open border at once. NOW REDUCED IN PRICE, SO THAT ALL MAY GROW THIS GLORIOUS GLADIOLUS. 3 for 2/6; 6 for 4/6; 12 for 8/-. Flower splendidly this season.

OLUS, NEW ASTER, AND OTHER PLANTS OF SPECIAL ALL ABOVE PACKED FREE AND CARRIAGE PAID.

IVY GERANIUM CHARLES TURNER.—One of the very best, good grower, and brilliant colour, superb for hanging baskets in or out of doors. Grand autumn rooted plants, 3 for 1/3; 6 for 2/-; 12 for 3/-.

CAMPANULUS ISOPHYLLA.—Beautiful dwarf trailing species, with large silver-shaped flowers; splendid for suspended pots, etc., forming hanging streamers of lovely white flowers 3ft. to 4ft. long, doubtless the queen of hanging basket plants. Equally good for in or outdoors. 4 for 1/6; 8 for 2/6. Bargain.

GLORIOUS HARDY CLIMBERS.

DOUBLE MORNING GLORY (Calystegia).—Rare hardy perennial climber; one of the most beautiful climbing plants, covered all through the summer with a mass of full double pale rose flowers in the shape of double clematis flowers, often 3in. across. Remarkably fast and easy growing; excellent for trellis-work, for covering walls, verandahs, balconies, etc., grows on every soil. Sometimes called Rose Vine and Californian Rose, it will luxuriate anywhere, sun or shade, and when well established, its long vines, wreathed in a profusion of large double rose-like blossoms, produce a very telling effect. 3 for 1/6; 6 for 2/9; 12 for 5/-.

TUBEROUS - ROOTED WISTARIA (or Violet-scented Pea-flower Climber).—A choice, rare, exceedingly hardy, perennial climber, closely resembling Wistaria in vine and foliage, and having clusters of rich, deep purple flowers, which have a strong delicious violet fragrance. Plant near a trellis, tree, or any place where you may wish a climber. They grow to a great height and bloom profusely. It delights in plenty of sunshine, and those who can give it a warm south aspect will be rewarded with a rich harvest of the most delicious, fragrant blossoms; if left undisturbed they become stronger and more beautiful every year. 3 for 1/6; 6 for 2/9; 12 for 5/-.

BIGNONIA RADICANS.—The lovely trumpet flower climber; will grow 40ft. high; graceful foliage; charming clusters of scarlet and orange blossoms. 3 for 1/3; 6 for 2/-; 12 for 3/9.

TROPÆOLUM SPECIOSUM.—The grandest of all perennial climbers; delights in damp, shady situations. Once established it becomes ravishingly beautiful. It is the glory of the Scotch Highlands. Plants now established in pots. No check, merely turn out and plant. Sent in the pot. Per pot, 1/3; 3 pots for 2/6; 6 for 4/6.

MERIT, see page ii. of "THE GARDEN" May 25th.

MRS. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD.

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NATIVE GUANO for Fruit, Roses, Tomatoes, &c.—W. D. FAY, Salisbury: "Strawberries, Tomatoes, Cabbage, etc., very heavy crops." H. S. WILSON, Thornton Heath: "Excellent for Roses and Lawns."

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IF FLOWERS WENT ON STRIKE, And wanted to be trees, No one could put the matter right Better than the BEES; Whose every nerve is strung, To make plants finer grow; Their Motto is not MINIMUM, But MAXIMUM you know."

A most laudable strike, and one that should be continuous in gardens, is that for maximum results in every department. Now, to know how, what, and where to buy seeds and plants and how to sow and grow them, is three parts of the battle. If you buy BEES' seeds you can gain this knowledge with the minimum amount of trouble, and easily procure maximum quality at minimum prices; therefore, do your minimum part now while it strikes you, and send to day to

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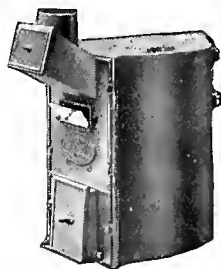
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COMPLETE WITH THE FAMOUS

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The most durable Boiler made. A genuine fuel and labour saver.



AWARDED TWO GOLD MEDALS

Our exhibit of "Horse Shoe" Boilers, etc., gained the HIGHEST AWARD in its class at the Olympia Show, July, 1911

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THE BEST INSECTICIDE.

BALMORAL CARBOLIC HARD SOAP

Strongly Recommended for Garden use. Made up in 2½d. and 3d. size tablets.

The packages bear maker's name, and the public are cautioned when ordering to make sure they get it.

OGSTON & TENNANT, Ltd., Aberdeen, Renfrew & London.

Garden Furniture OF EVERY DESCRIPTION.



Seats, Tables Rustic Arches Arbors Trellis Work Gates, Fencing, &c., &c. Send your requirements. Catalogue free.

The "Buckingham" Seat and Table, substantially constructed of selected red deal left rough from the saw, except the slats of seat and table which are planed, they are finished with a special preservative which protects the wood from the weather and makes them look JUST LIKE OAK. An ideal seat for tea, club, or private gardens, bowling greens, &c., being specially constructed to stand hard wear. Length of seat 4ft. 6in., other sizes to order. It is very inexpensive and really an ornamental seat which proved such a favourite with my customers last season. Packed and carriage paid, 15/- each, 27/6 the pair; 2 seats 40/-; 2 seats and 1 table 40/-. This seat and table are also made planed up and painted three coats, white or green, 25/- each, carriage paid; made in English oak, £2 2s. each.

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W. T. Revitt, Railway Works, Olney.

THE GARDEN, JUNE 22, 1912.

THE GARDEN

A WEEKLY
ILLUSTRATED JOURNAL FOR GARDEN
ORCHARD AND WOODLAND

SATURDAY,

JUNE 22, 1912.

of the
1912
Cultural
College

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A GOOD
HYBRID TEA ROSE.

MRS. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD.

26th SEASON.

Known all over the World where Plants, Bulbs and Trees can be sent. Thousands upon thousands of Testimonials for Quality, Packing, Freshness and Safe Arrival.

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GREAT FINAL BARGAIN OFFER.

Plant Out Splendidly Now.

BRUGMANSIA KNIGHTII.

Produces the sweetest & most delicious fragrance of any flower on earth.

Called also Angels' Trumpets and Wedding Bells. One of the grandest hard-wooded plants I know of, and easy to grow. It grows several feet high, and is quite bushy. The foliage is large and tropical, and its bloom—how shall I describe what words cannot picture? Imagine a little bush three feet high, and with 20 or 30 pendulous blooms open at once; great creamy-white blooms, 11, 12, or 13 inches long, and 8 inches wide, and of a texture resembling thick fluted satin. Imagine these creamy trumpets pouring fragrance forth till the air is heavy with sweetness. Imagine all this, then remember the blossoms last for days in perfection, and that new buds are constantly coming on: it is quite as easy to grow as a geranium or fuchsia, and requires the same treatment. A good plant in the garden during the summer is the talk of the neighbourhood. **STOCK LIMITED.** Strong plants, 2/6; selected, 3/6 (no more at 5/-, 2/6 or 10/6 to offer). All sent with ball of earth; no check. Can be grown in greenhouse all the year round, or planted out for the summer. **NOW BEST TIME TO POT OR PLANT OUT.**

Read what Mr. LEIGHTON, Kilmarnock, says about this glorious plant:—"I am delighted to tell you how beautiful the Brugmansia has been in the greenhouse. During spring it flowered abundantly, having 27 blossoms out at one time. Then I put it outdoors for the summer, where it has been blooming all the time, and had 30 blossoms out at once." Mrs. SEYMOUR, Maidstone, writes, May 9:—"Please send me another 5/- Brugmansia. The one I had last year was most successful in the garden, and simply magnificent."

FOR OTHER BARGAINS SEE PAGE

CACTUS DAHLIAS.—A grand lot of plants, in choicest variety, lovely colours, grown from very best named varieties, not seedlings, which are worthless compared with these strong, well-rooted plants; all colours, mixed. Bargain price, 6 for 1/-; 12 for 2/-; 25 for 3/6.

THE MOST FAMOUS GLADIOLUS OF ALL IS MY BLUE GLADIOLUS.—*Amateur Gardening* says: "The colour is grand." Not a pale, weak, or washed out blue, but true, deep, rich blue, of such sterling merit as to cause a sensation wherever grown or shown. It is a colour absolutely distinct. The flowers are large and bold; and so beautiful as to be absolutely peerless amongst Gladiolus. Perfectly hardy, and should be planted in the open border at once. **NOW REDUCED IN PRICE, SO THAT ALL MAY GROW THIS GLORIOUS GLADIOLUS.** 3 for 2/-; 6 for 3/6; 12 for 6/-. Flower splendidly this season.

GIANT FLOWERING HYBRID GLADIOLUS.—Started in growth, ready to flower this season. A few hundred to clear. Great bargain. 12, 1/3; 25, 2/3; 50, 4/-. Also a few of the famous Golden Valley, superb colours. 12 for 2/-; 25, 3/6; 50, 6/-; this is not half price.

CAMPANULUS ISOPHYLLA.—Beautiful dwarf trailing species, with large salver-shaped flowers; splendid for suspended pots, etc., forming hanging streamers of lovely white flowers 3ft. to 4ft. long, doubtless the queen of hanging basket plants. Equally good for in or outdoors. 4 for 1/3; 12 for 3/-.

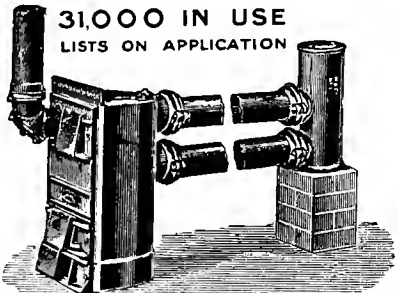
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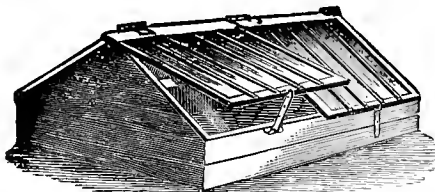


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OUR WELL-KNOWN MAKE



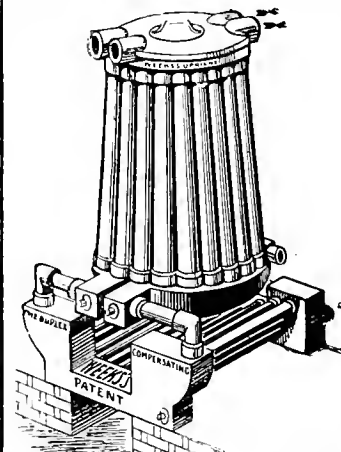
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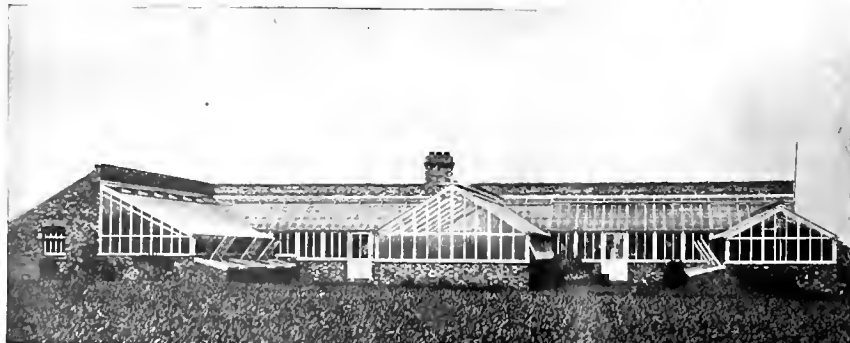
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THE GARDEN, JULY 6, 1912.

THE GARDEN

A WEEKLY
ILLUSTRATED JOURNAL FOR GARDEN
ORCHARD AND WOODLAND

SATURDAY, JULY 6, 1912.

VOL. LXXVI. No. 2120.

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SWEET PEA.

THE GREAT ROSE SHOW OF THE YEAR
 Will be held by THE NATIONAL ROSE SOCIETY
 in the
ROYAL BOTANIC GARDENS
 REGENT'S PARK, N.W.
On TUESDAY, JULY 9th.

The two Champion Challenge Trophies will be competed for, also numerous other Cups and Pieces of Plate, and Money Prizes to the value of over £400.

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 in a separate tent.

Bands of the Royal Horse Guards (The Blues), and Scots Guards.

Luncheons, Teas, and other Light Refreshments.

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WOLVERHAMPTON.

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FLORAL FÊTE,

JULY 9th, 10th, and 11th, 1912.

NEXT WEEK.

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SATURDAY, JULY 13th.

Class I (Open). Prizes £3, £2, £1.

SCHEDULES, HOCKIN, BATH ROAD, WOKING



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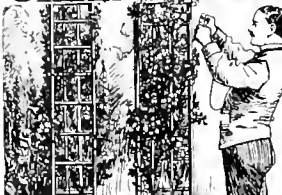
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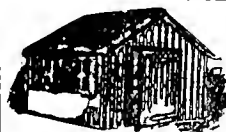
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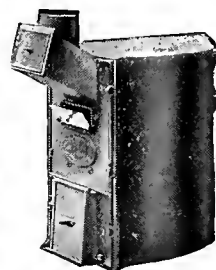
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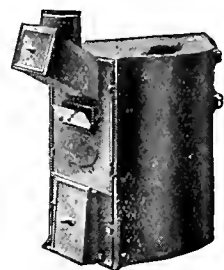
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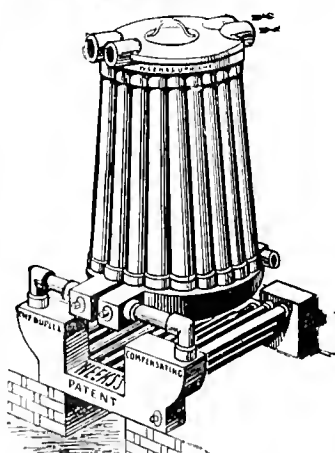
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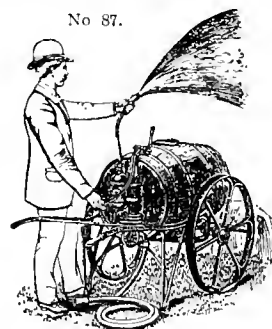


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